

Chang Wen Chen

CONTACT INFORMATION:

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CAREER HIGHLIGHTS:

- **Interim Dean, Faculty of Computer and Mathematical Sciences**, The Hong Kong Polytechnic University, 2025-2026
- **Winner, 2024 ACM SIGMM Outstanding Technical Achievement Award**
- **Elected Member, Academia Europaea**, 2021
- **Dean, School of Science and Engineering**, The Chinese University of Hong Kong, Shenzhen, 2017-2020
- **Distinguished ECE Alumni Award**, University of Illinois at Urbana-Champaign, 2019
- **SUNY Chancellor's Award for Excellence in Scholarship and Creative Activities**, State University of New York System, 2016
- **Editor-in-Chief, IEEE Trans. Multimedia**, Jan 2014 – Dec 2016
- **UB Exceptional Scholar – Sustained Achievement Award**, State University of New York at Buffalo, 2012
- **Hans Fisher Senior Fellow**, Institute for Advanced Study, Technical University of Munich, Germany, 2011 – present
- **Alexander von Humboldt Research Award**, US Senior Scientist category, 2010
- **Editor-in-Chief, IEEE Trans. Circuits & Systems for Video Tech.**, Jan 2006 – Dec 2009
- **Allen Henry Endowed Chair Professor**, Florida Institute of Technology, 2003 – 2007
- **Sigma Xi Excellence in Graduate Research Mentoring Award**, University of Missouri-Columbia, 2003
- **Fellow, IEEE (Institute of Electrical and Electronics Engineers)**, for contributions to digital image and video processing, analysis and communications, 2004
- **Fellow, SPIE (International Society for Optical Engineering)**, for contributions to electronic imaging and visual communications, 2007
- Author/Co-Author of eleven (11) **Best Paper Awards/Best Student Paper Awards** for papers published in premier IEEE Transactions and IEEE/ACM conferences
- **Globally highly ranked scholar in multiple disciplines: #5 in multimedia systems, #5 in image/video processing, #7 in multimedia communication, and #9 in multimedia signal processing** (<https://scholar.google.com/citations?user=w2HXPUUAAA&hl=en>)

CURRENT RESEARCH INTERESTS:

- Multimedia communication, mobile video streaming, Internet of Video Things (IoVT)
- Multimedia systems, visual surveillance systems, smart city, mobile healthcare system

- Image/video processing, computer vision, deep learning, GAN/CNN for image aesthetics
- Multimedia signal processing, mobile virtual reality, 360° video, immersive mobile video

EDUCATION:

- Doctor of Philosophy (October 1992),
Advisor: Professor Thomas S. Huang,
Department of Electrical and Computer Engineering,
University of Illinois at Urbana-Champaign (UIUC)
- Master of Science in Electrical Engineering (December 1986),
Advisor: Professor Rama Chellappa
Department of Electrical Engineering - Systems,
University of Southern California (USC), Los Angeles
- Bachelor of Science in Electrical Engineering (July 1983),
Department of Electrical Engineering,
University of Science and Technology of China, Hefei, China,

ACADEMIC EXPERIENCE:

- Chair Professor of Visual Computing
Director, Advanced Visual Computing Laboratory
The Hong Kong Polytechnic University — April 2021 – Present
- SUNY Empire Innovation Professor of Computer Science and Engineering
Director, UBMM – Ubiquitous Multimedia Laboratory
State University of New York at Buffalo (UB) — January 2008 – March 2021
- Dean, School of Science and Engineering (June 2017 – January 2020)
Presidential Chair Professor (June 2017 – August 2020)
The Chinese University of Hong Kong, Shenzhen— (On-leave without Pay from UB)
- Allen S. Henry Endowed Chair Professor of Engineering
Director, Wireless Center of Excellence (WiCE)
Florida Institute of Technology — July 2003 – December 2007
- Assistant/Associate Professor of Electrical and Computer Engineering (Tenured)
University of Missouri – Columbia — September 1996 – June 2003
- Research Assistant Professor of Electrical and Computer Engineering
University of Rochester — August 1992 – September 1996

INDUSTRIAL EXPERIENCES:

- Head, Interactive Media Group
(On-leave from University of Missouri-Columbia)
David Sarnoff Research Laboratories — September 2000 - October 2002

- Senior Technical Advisor
Media Communications Laboratory
Huawei Technologies Co, LTD — May 2008 – May 2014
- Senior Visiting Researcher
Mobile and Internet Multimedia Groups
Microsoft Research Asia, Beijing — Summers 1999 – 2000, 2004, 2006 – 2013
- Imaging Science Consultant
Imaging Science Research Laboratory
Eastman Kodak Company — 1994 – 1996

SUMMARY OF LEADERSHIP EXPERIENCES

Major Achievements as Dean of the School of Science and Engineering at CUHKSZ (June 2017 – January 2020):

- Significant Growth in Undergraduate Students: Led an effective School level campaign in undergraduate recruiting by visiting top high schools in several provinces in China. Promote whole-person education curriculum to high school students. Growing from freshman/sophomore two classes (700) in 2017 to ALL four classes (1800+);
- Outstanding Graduation Class: Design a strategic campaign by working with top universities in US and in Europe to introduce and promote the innovative educational programs of this newly established university CUHKSZ. Personally write reference letters for most Dean's List students (50+). Impressive Results: 78% of the first graduating class go for graduate school worldwide; 60% of the graduate admissions are from world top 100 universities.
- Successful Faculty Recruiting: Made several recruiting trips to US, Europe and Asia-Pacific regions and personal meetings with graduating PhD students and Postdocs. Successfully recruited 80+ new faculty members in ALL eight (8) different major areas in science and engineering, including over a dozen world leading distinguished scholars (Fellows of IEEE and other professional societies)
- New Curriculum/New Major Creation: Led the initiatives in creating new curricula for several new majors and developing several dozens of new courses; Designed and opened 70+ new major required/major elective courses; Total courses offered by SSE has grown from 70 in 2017 academic year to over 150+ in 2019 academic year; Designed effective procedures for course scheduling and instructor assignment
- International Education Programs: Reaching out to international universities in US and Europe to show high educational quality at CUHKSZ and to develop innovative joint-educational programs: (1) 3+2 Joint BS/MS programs, (2) 4+1 Joint BS/MS program, (3) One semester abroad program, (4) Summer study program; By the end of 2019, the total number of partners universities has reached 100, mostly from US and Europe, including formal joint degree programs with University of Michigan and University of Minnesota and short-term programs with many international universities, including top universities: University of California-Berkeley, University of Cambridge, University of Oxford, and Carnegie Mellon University
- Establishing Strong Research Program: Leading the initiatives in establishing three Nobel Laureate Laboratories in SSE (Kobilka, Warshel, and Ciechanover, each supported by a funding of 100 Million RMB for five years), which has recently been moved to the newly established School of Life and Health Sciences. Design and execute an effective

campaign for individual faculty to secure external grants from both national and local funding agencies. Annual funding grown from 42 Million RMB in 2017 to 193 Million RMB in 2019, a 4X growth in two years.

- Problem Solving and Community Reach-Out: For such a newly established university, it mandates the Dean to develop creative solutions for various unforeseen problems, related to both academic issues and personal issues for faculty, staff, and students. Promoting strong collaborative spirits to work with diverse constituents within the University and beyond the campus walls (industry/government).

Major Achievements as Deputy Director (Concurrent appointment June 2018 – December 2020) of the Peng Cheng Laboratory (PCL) (<http://www.szpclab.com/>):

- Exploratory Research Program: Design and implement PCL's exploratory research program to attract top scientists from within China and abroad to conduct independent investigations of groundbreaking research. Successfully recruited over one dozen top researchers: Members of the Chinese Academy of Sciences and the Chinese Academy of Engineering. Total annual budget for this program: >100M RMB.
- International Collaboration Program: Initiate and oversee PCL's carefully planned international collaboration program through developing strategic cooperation with top academic and research institutions in Europe and the Asia-Pacific regions. Signed cooperation agreements with 10+ top universities, including NUS, NTU, HKUST, HK CityU, HK PolyU, TUM, and EPFL. Developing strategic relationships with top AI Institutions in Europe: ELLIS and DFKI. Exploring the international exchange of PCL's young researchers with international collaborating institutions
- Talent Recruiting Program: Initiate and organize the annual Overseas Talent Recruiting Forum by inviting selected graduating PhD students and Postdocs from overseas institutions to share their research at PCL and for PCL investigators to demonstrate PCL's research at the Forum for effective talent recruiting. The Forum held in March 2019 attracted 200+ applicants, and 52 of them were invited to attend. Over one dozen of these participants have been recruited to join PCL either full time or part time

Major Achievements as Vice President of Finance and Administration for IEEE Circuits and Systems Society (January 2016 – December 2018):

- Society Overall Budget Planning: Responsible for CASS society level overall budget preparation and execution; Balancing income from membership as well as society-sponsored journals and conferences and expense for society administrative operations, journal and conference operations and local chapter operations. Total annual budget: ~US\$ 4.5 Million; Average surplus for 2016-2018: ~US\$ 300K
- Society President's Initiatives: Assisting CASS President in the budget planning and monitoring of President's Initiatives, including CASS History Book, Student Design Competition, Local Chapter Revitalization, and CASS Book Series. Worked with two CASS Presidents, Prof. Franco Maloberti and Prof. Yong Lian, with an annual budget of US\$ 300K for initiatives
- Annual Outreach Initiatives: Initiate and lead the annual CASS Outreach Program to promote CASS in different geographical regions through sponsoring activities organized by the local CASS Chapters. For three consecutive years, a total of 200+ proposals have been received and about 40% of these proposals are selected based on their merits in four main categories: (1) attracting new members; (2) enhancing services to current members;

(3) enhancing industry-academic collaborations, and (4) special services to female and young members. Total annual budget: ~US\$200K

Major Achievements as Editor-in-Chief (EiC) for IEEE Trans. Multimedia (T-MM) (January 2014 – December 2016):

- Substantial Increase in Paper Submission: One of the major problems for T-MM before 2014 was the declining of paper submission that resulted in a proposal from the outgoing Editor-in-Chief to reduce from 8 issues per year to 6 issues per year. The major reason for the declining is the long review cycle and the incompetence of the Editorial Board in the timely handling of the submissions. I took a hands-on approach immediately after taking over the EiC office and work intimately with the Publication Office for timely handling of the paper submitted to T-MM. Another effective means to help increase the paper submission was to promote T-MM at all major conferences related to multimedia by attending and organizing T-MM information sessions. At the end of my term in 2016, the paper submission has increased 200+%.
- Revitalizing Editorial Board to Match Submission Data: It is my believe that Associate Editors (AEs) shall perform best when they are assigned papers in their own expertise areas or in the emerging areas they are interested in. It is extremely important for EiC to know all AEs professionally and know their expertise areas to assign papers to AEs. The dynamics nature of the submission distribution in term of EDICS needs to be closely monitored so as the update the composition of Editorial Board for effective handling of the reviews by AEs. As EiC, frequent checking of submission statistics ensures that the appointment of AEs matches with the paper submission statistics. Such exercise has been shown to be very effective and improve the review process and shorten the review cycle. The average time from submission to first decision has been significantly cut to 83 days in 2016, comparing with 130+ days in 2013.
- Building Intimate Working Relation with Sponsoring Societies: As T-MM is sponsored by four IEEE Societies, it is extremely important for EiC to work with all four societies at all levels. At the top level, the T-MM Steering Committee (SC) is composed of eight members, two from each society. This committee is charged with major decisions related to the AE appointment, operational budget, and strategic direction setting. The EiC was keeping this committee informed of T-MM status periodically and sought their advice and input on all major issues.
- Enhancing Interaction with T-MM Grassroots Constituents: For any academic journal, the recognition and acceptance by the grassroots researchers are the key to its success in all aspects, including number of submissions, timely review of papers, rigorous selection of papers for publication, and impact or citation of the published papers. During my term as T-MM EiC, I have worked intimately with the TC leaders and members of all four Societies. Especially the recruiting of AEs and appointment of SC representatives were passed to four Society TCs for nomination and selection. This grassroots-based strategy has generated great results: The papers published in T-MM have been recognized by the broader multimedia community which resulted in significant increase in citation and the impact factor for T-MM has more than doubled from 1.6 in 2014 to 3.9 in 2016.

HONORARY APPOINTMENT:

- **Honorary Member**, China Society of Image and Graphics, 2011 –
- **Honorary Hans Fisher Senior Fellow**, Institute for Advanced Study, Technical University of Munich, Germany, 2011 –

- **Honorary Professor**, XiDian University, Xi'an, China, 2008 –
- **Grand Master Distinguished Visiting Professor**, University of Science and Technology of China, 2006 – 2017
- **Distinguished Visiting Professor**, Institute for Media Technology, Technical University of Munich, Germany, March –June, 2010 and June – August, 2011
- **Distinguished Guest Professor**, National Cheng Kung University, Tainan, Taiwan, April – June, 2009

BEST PAPER AWARDS:

- **Best Paper Award**, Finalist (15 out of 8000+), at 2024 European Conference on Computer Vision (ECCV 2024) (Z. Chen, J. Wu, Z. Lei, Z. Zhang, C. W. Chen, “Expanding Scene Graph Boundaries: Fully Open-vocabulary Scene Graph Generation via Visual-Concept Alignment and Retention,” Proc. ECCV2024, Milan, Italy, October 2024) Z. Chen: PhD student.
- **IEEE Trans. Multimedia 2021 Prize Paper Award**, Runner-Up, for the paper: X. Min, K. Gu, G. Zhai, J. Liu, X. Yang and C. W. Chen, “Blind Quality Assessment based on Pseudo-Reference Image,” *IEEE Trans. Multimedia*, Vol. 20, No. 8, August 2018
- **2016 Test of Time Award** in Computer Networking by Shanghai Computer Society, for the paper: C. Luo, F. Wu, C. W. Chen, J. Sun, “Compressive data gathering for large-scale wireless sensor networks,” *MobiCom 2009, Annual International Conference on Mobile Computing and Networking*, September 2009, Beijing, China
- **Best Paper Award** at *2014 IEEE International Conf. Multimedia and Expo (ICME 2014)* (J. Hu, D.-Q. Zhang, H. Yu and C. W. Chen, “High Resolution Free-view Interpolation of Planar Structure,” Proc. IEEE ICME 2014, Chengdu, China, July 2014) J. Hu: PhD student.
- **Best Student Paper Award** at *2013 IEEE International Conf. Multimedia and Expo (ICME 2013)* (Z. Xu, X.-J. Wang and C. W. Chen, “Mining Visualness,” Proc. IEEE ICME 2013, San Jose, CA, July 2013) Z. Xu: M.S. student.
- **Best Student Paper Award** at *2012 IEEE Visual Communications and Image Processing Conference (VCIP2012)* (W. Yin, T. Mei and C. W. Chen, “Assessing photo quality with geo-context and crowdsourced photos,” Proc. IEEE VCIP 2012, San Diego, CA, Nov 2012.) W. Yin: PhD student.
- **Best Paper Award** Runner-up at *2012 IEEE International Conference on Multimedia and Expo (ICME2012)* (Q. Liu, Z. Zou and C. W. Chen, “QoS-driven and fair downlink scheduling for video streaming over LTE networks with deadline and hard hand-off,” Proc. ICME 2012, pp. 188-193, Melbourne, Australia, July 2012) Q. Liu: PhD student.
- **Best Student Paper Award** from *ACM MobiMedia 2009* (J. Zhang, H. Li and C. W. Chen, “Progressive Distributed Coding of Multispectral Images” Presented at *5th International Mobile Multimedia Communication Conference*, September 2009, London, UK) J. Zhang: M.S. student.
- **IEEE ComSoc Multimedia Communications TC 2008 Best Paper Award**, (Z. Li, Q. Sun, Y. Lian and C. W. Chen, “Joint source-channel-authentication resource allocation and unequal authenticity protection for multimedia over wireless networks,” *IEEE Trans. Multimedia*, Vol. 9, No. 4, pp. 837-850, June 2007)
- **Michael B. Merickel Award for Best Student Paper** at the *1999 SPIE Medical Imaging International Symposium* (L. Fan and C.W. Chen, “3D warping and registration from lung images,” Presented at *SPIE Medical Imaging '99*, February 1999, San Diego, CA) Li Fan: PhD student.

- **Best Student Paper Award** at *1994 SPIE Visual Communication and Image Processing*. (J. Luo, C.W. Chen and K. J. Parker, “On the application of Gibbs random field in image processing: from segmentation to enhancement,” Presented at *VCIP '94*, September 1994, Chicago, IL.) Jiebo Luo: Ph.D. student.

PAPER AWARDS FINALISTS:

- Best Paper Award Finalist at *14th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWiM2011)* (H. Cui, C. Luo, K. Tan, F. Wu and C. W. Chen, “Seamless Rate Adaptation for Wireless Networking,” *Proceedings of MSWiM2011*) H. Cui: PhD student.
- Best Paper Award Finalist at *2011 IEEE International Conference on Multimedia and Expo (ICME2011)* (X. Zhu and C. W. Chen, “Towards Maximal Decodable Rate for Multi-rate Multicast of Digital Media with Network Coding,” *Proceedings of ICME2011*) X. Zhu: PhD student.
- Best Student Paper Award Finalist at *International Symposium on Circuits and Systems 2011* (Q. Liu, Z. Zou and C. W. Chen, “A Deadline-Aware Virtual Contention Free EDCA Scheme for H.264 Video over IEEE 802.11e Wireless Networks” *Proc. of International Symposium on Circuits and Systems 2011*) Q. Liu: PhD student.
- Best Student Paper Award Finalist from *2009 IEEE International Conference on Multimedia and Expo 2009* (X. Zhu, Z. Zhang and C. W. Chen, “A joint layered coding scheme for unified reliable and secure media transmission with implementation on JPEG 2000 images,” *Proc. 2009 International Conf. Multimedia and Expo*, June 2009) X. Zhu: PhD student.

KEYNOTE/PLENARY SPEECHES:

- **Keynote Speaker**, MSMA'2025: The 1st International Workshop on Multi-Sensorial Media and Applications, Held Jointly with ACM MM2025, Oct 27, 2025, Dublin, Ireland
- **Keynote Speaker**, The 7th IEEE Workshop on Artificial Intelligence for Art Creation, Held Jointly with ICME2025, July 4, 2025, Nantes, France
- **Keynote Speaker**, 2025 International Conference on Networking and Communications (ICNC2025), Honolulu, HI, USA, February 17-20, 2025
- **Keynote Speaker**, 2024 ACM International Conference on Multimedia (MM2024), Melbourne, Australia, October 30 – November 2, 2024
- **Keynote Speaker**, 2024 IEEE International Workshop on Multimedia Signal Processing (MMSP2024), West Lafayette, IN, USA, October 2-4, 2024
- **Keynote Speaker**, 2024 IEEE International Conference on Multimedia and Expo (ICME2024), Niagara Falls, Canada, July 15-19, 2024
- **Keynote Speaker**, 2024 IEEE International Conference on Control and Automation (ICCA2024), Reykjavik, Iceland, June 18-22, 2024
- **Keynote Speaker**, 2023 ACM Multimedia Asia (MM Asia 2023), Tainan, Taiwan, December 6-8, 2023
- **Keynote Speaker**, 2023 ACM Multimedia (MM2023), Ottawa, Canada, October 29, 2023 – November 3, 2023
- **Keynote Speaker**, 2022 IEEE International Conference on Visual Communication and Image Processing (VCIP2022), December 13-16, 2022
- **Keynote Speaker**, “One Belt and One Road” Artificial Intelligence Grand Forum organized by XiDian University, December 13-14, 2021

- **Keynote Speaker**, IEEE BigMM2018, Fourth IEEE International Conference on Multimedia Big Data, Xi'an, China, September 2018
- **Keynote Speaker**, *AINGIOT2018* Artificial Intelligence and Its Applications on Next Generation of Internet of Things, Kitakyushu, Japan April 2018
- **Keynote Speaker**, *ChinaMM2017*, China Computer Federation Multimedia Technology Annual Conference, Nanjing, China September 2017
- **Keynote Speaker**, IEEE BigMM2017, Third IEEE International Conference on Multimedia Big Data, Laguna Hills, CA, USA April 2017
- **Keynote Speaker**, ACM ICMICS2016, 2016 ACM International Conference on Internet Multimedia Computing and Service, Xi'an, China, August 2016
- **Keynote Speaker**, IS&T Electronic Imaging 2016, Symposium on Imaging and Multimedia Analytics in a Web and Mobile World, San Francisco, February 2016
- **Keynote Speaker**, *MMM2016*, The 22nd International Conference On MultiMedia Modelling, Miami, USA, January 2016
- **Keynote Speaker**, *GlobalSIP2015*, The 3rd IEEE Global Conference on Signal and Information Processing, Orlando, USA, December 2015
- **Keynote Speaker**, *MMSIP2015, IEEE Workshop on Multimedia Signal Processing 2015*, Xiamen, China, October 2015
- **Keynote Speaker**, *China Institute of Electronics* Young Scientist Forum on Cooperative Computing in Multimedia Communications, Beijing, China, November 2014
- **Keynote Speaker**, *IEEE ICME2014 Workshop on Emerging Multimedia Systems and Applications*, Chengdu, China, July 2014
- **Keynote Speaker**, *ICIEA2014, 9th IEEE Conference on Industrial Electronics and Applications*, Hangzhou, China, June 2014
- **Keynote Speaker**, *ICT2014, 2014 International Conference on Information and Communications Technologies* Nanjing, China, May 2014
- **Keynote Speaker**, *China Institute of Electronics Youth Conference 2012*, Beijing, China, December 2012
- **Keynote Speaker**, *NEM (New and Electronic Media) SUMMIT 2012*, Istanbul, Turkey, October 2012
- **Keynote Speaker**, *ICME2012, IEEE International Conference on Multimedia and Expo*, Melbourne, Australia, July 2012
- **Keynote Speaker**, *VCIP2011, IEEE Visual Communications and Image Processing*, Tainan, Taiwan, November 7, 2011
- **Keynote Speaker**, *The First Huawei Workshop on Multimedia Processing and Computing in Cloud*, April 4, 2011
- **Plenary Speaker**, *2010 IEEE Globecom*, December 9, 2010
- **Keynote Speaker**, *ICME2010 Workshop on IPTV Technologies and Multidisciplinary Applications*, July 23, 2010
- **Keynote Speaker**, *2010 IEEE International Conference on Ubi-media Computing (U-Media)*, July 6, 2010
- **Keynote Speaker**, *2009 Pacific-Rim Conference on Multimedia*, December 16, 2009
- **Keynote Speaker**, *2009 ACM International Conference on Internet Multimedia Computing and Service*, November 23, 2009
- **Keynote Speaker**, *2009 Asia Pacific Conference on Postgraduate Research in Microelectronics & Electronics*, November 20, 2009
- **Keynote Speaker**, *2009 International Conference on Multimedia Information Networking and Security*, November 18, 2009

- **Keynote Speaker**, *5th International Mobile Multimedia Communication Conference*, September 8, 2009, London, UK
- **Keynote Speaker**, *IEEE International Multimedia Signal Processing Workshop*, October 10, 2008
- **Keynote Speaker**, *The 14th Chinese National Conference on Image and Graphics*, May 17, 2008
- **Keynote Speaker**, *The 4th International Forum of Digital TV & Wireless Multimedia Communication*, October 16, 2007
- **Keynote Speaker**, *Mid-South Area Engineering & Sciences Conference*, May 17, 2007
- **Keynote Speaker**, *International Computer Symposium*, December 6, 2006
- **Keynote Speaker**, *2nd International Computational Intelligence and Security*, November 5, 2006
- **Keynote Speaker**, *The 3rd International Forum of Digital TV & Wireless Multimedia Communication*, November 3, 2006
- **Keynote Speaker**, *25th Picture Coding Symposium*, April 26, 2006
- **Keynote Speaker**, *2005 International Forum on Technology and Economy*, June 2005
- **Keynote Speaker**, *2002 International Conference on Communications, Circuits, and Systems*, July 2002

MAJOR PROFESSIONAL SERVICES:

1. Editorial Services

- **Deputy Editor-in-Chief**, *IEEE Transactions on Image Processing*, October 2024 – Present
- **Senior Editor**, *IEEE Journal of Selected Topics in Signal Processing*, May 2023 – Present
- **Steering Committee Member**, *IEEE Transactions on Multimedia*, Representing IEEE Computer Society, 2023 – 2025
- **Associate Editor-in-Chief**, *IEEE Transactions on Biometrics, Behavior and Identity Science*, 2022 – 2024
- **Editor-in-Chief**, *IEEE Transactions on Multimedia*, 2014 – 2016
- **Editor-in-Chief**, Taylor & Francis Press ***Book Series in Multimedia Computing, Communication and Intelligence***, 2010 – Present
- **Editor-in-Chief**, *IEEE Trans. Circuits and Systems for Video Technology*, 2006 – 2009
- **Chair, Editorial Advisory Board**, *Journal of Multimedia*, Academy Publishers, 2008 – Present
- **Senior Editor**, *IEEE Journal of Selected Topics in Signal Processing*, 2023 – Present
- **Senior Editor**, *IEEE Journal of Selected Areas in Communication*, 2011 – 2019
- **Senior Editor**, *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, 2010 – 2013
- **Editorial Board Member** (Media Review Column Editor), *IEEE MultiMedia Magazine*, January 2003 – 2006.
- **Associate Editor**, *IEEE Trans. Multimedia*, January 2002 – 2005.
- **Associate Editor**, *IEEE Trans. Circuits and Systems for Video Technology*, 1997 – 2005
- **Editorial Board Member**, *Journal of Visual Communication and Image Representation*, January 2000 – 2006.
- **Editorial Board Member**, *Journal of Computerized Medical Imaging and Graphics*, January 2000 – December 2002.

- **Guest Editor**, *IEEE Journal on Selected Areas in Communications* special issue on QoE-Aware Wireless Multimedia Systems, 2011-2012
- **Guest Editor**, *IEEE Communications Magazine* special issue on QoE Management in Emerging Multimedia Services, 2011-2012
- **Chief Guest Editor**, *Proceedings of IEEE* special issue on Recent Advances in Distributed Multimedia Communications, January 2008
- **Guest Editor**, *Journal of China Communications* special issue on Emerging topics in Multimedia Communications, 2006
- **Guest Editor**, *IEEE Journal on Selected Areas in Communications* special issue on Cross-Layer Optimized Wireless Multimedia Communications, 2006
- **Guest Editor**, *Journal of Visual Communication and Image Representation* special issue on Visual Communications in the Ubiquitous Era, 2005
- **Guest Editor**, *Signal Processing: Image Communication* special issue on Recent Advances in Wireless Video, 2003
- **Guest Editor**, *IEEE Trans. Circuits and Systems for Video Technology* special issue on Wireless Video, 2002.
- **Guest Editor**, *Journal of Wireless Communication and Mobile Computing* special issue on Multimedia Over IP, 2002
- **Guest Editor**, *IEEE Journal on Selected Areas in Communications* special issue on Error-Resilient Image and Video Transmission, 2000.

2. Conference Organizations

- **General Co-Chair**, ACM MM2027, ACM International Conference on Multimedia 2027, Hong Kong SAR, China, October 2027
- **General Co-Chair**, MM Asia 2021, ACM Multimedia Asia 2021, Gold Coast, Australia, December 2021
- **Brave New Idea Track Chair**, ACM MM2021, ACM International Conference on Multimedia 2021, Chengdu, China, October 2021
- **Honorary Chair**, IEEE ICME2021, IEEE International Conference on Multimedia and Expo 2021, Shenzhen, China, July 2021
- **Panel Chair**, IEEE ICASSP2021, IEEE International Conference on Acoustics, Speech, and Signal Processing 2021, June 2021, Toronto, Canada
- **General Co-Chair**, ACM MM2020, ACM International Conference on Multimedia 2020, Seattle, WA, USA, October 2020
- **Honorary Chair**, IEEE MIPR2020, IEEE 3rd International Conference on Multimedia Information Processing and Retrieval 2020, Shenzhen, China, August 2020
- **Steering Committee Member**, IEEE International Symposium on Circuits and Systems, Sponsored by IEEE CAS Society, 2011 – 2016
- **Chair, Steering Committee**, IEEE International Conference on Multimedia and Expo, Sponsored by IEEE CAS, ComSoc, Computer, and SP Societies, 2012 – 2014
- **Steering Committee Member**, IEEE International Conference on Multimedia and Expo, Sponsored by IEEE CAS, ComSoc, Computer, and SP Societies, 2009 – 2012, 2014 - 2016
- **Steering Committee Member**, Picture Coding Symposium, International Conference Series since 1969, 2006 – Present
- **Steering Committee Member**, International Packet Video Workshop, Conference Series since 1987, 2006 – Present
- **General Co-Chair**, ACM Multimedia 2020, Seattle, WA, US, October 2018

- **Panel Chair**, *ICME2019*, IEEE International Conference on Multimedia and Expo 2019, Shanghai, China, July 2019
- **Technical Program Co-Chair**, ACM Multimedia 2018, Seoul, Korea, October 2018
- **Award Chair**, IEEE International Conference on Multimedia and Expo 2016, Seattle, WA, US, July 2016
- **Penal Chair**, ACM Multimedia 2015, Brisbane, Australia, October 2015
- **Penal Chair**, ACM Multimedia 2014, Orlando, FL, November 2014
- **General Co-Chair**, IEEE International Symposium on Circuits and Systems, Beijing, China, May 2013
- **Conference Advisor**, ACM 10th International Conference on Mobile and Ubiquitous Multimedia, Beijing, China, December 2011
- **General Co-Chair**, The 6th International Conference on Image and Graphics, Hefei, China, August 2011
- **Technical Program Committee Chair**, StreamComm 2011, IEEE Workshop on Streaming and Media Communications, Barcelona, Spain, July 2011
- **General Chair**, ACM Multimedia 2010 Workshop on Mobile Cloud Media Computing, Florence, Italy, October 2010
- **Panel Chair**, IEEE International Conference on Multimedia and Expo 2010, Singapore, July 2010
- **Panel Co-Chair**, ACM Multimedia 2009, Beijing, China, October 2009
- **Chair, Best Paper Award Committee**, SPIE Conference on Visual Communications and Image Processing, San Jose, CA, January 2009
- **General Co-Chair**, 2008 IEEE International Conference on Communications, Communication Software and Services Symposium, Beijing, China, May 2008
- **Chair, Best Paper Award Committee**, IEEE International Conference on Multimedia and Expo. Hannover, Germany, June 2008
- **Chair, Best Paper Award Committee**, SPIE Conference on Visual Communications and Image Processing, San Jose, CA, January 2008
- **General Co-Chair**, 2007 IEEE International Workshop on Signal Processing Systems, Shanghai, China, October 2007
- **Co-Chair**, ACM Multimedia 2007 Workshop on Mobile Video, Augsburg, Germany, September 2007
- **Program Committee Chair**, 2007 Visual Communication and Image Processing, San Jose, CA January 2007
- **Technical Program Committee Chair**, 2006 IEEE International Conference on Multimedia and Expo, Toronto, Canada, July 2006
- **Program Committee Chair**, 2006 SPIE Conf. Multimedia on Mobile Devices, San Jose, CA January 2006
- **Program Committee Chair**, 2005 SPIE IT Com: Multimedia Systems and Applications, Boston, MA, October 2005
- **Program Committee Chair**, 2004 SPIE IT Com: Multimedia Systems and Applications, Philadelphia, PA, October 2004
- **Plenary Chair** and Member, Technical Program Committee, 2003 IEEE International Conference on Information Technology: Research and Education, Newark, NJ, August 2003
- Member of Technical Program Committee and Session Chair for numerous ACM, IEEE and other international conferences since 1993, including ACM MM, ICASSP, ICIP, ISCAS, ICC Globecom, WCNC, VCIP, ICPR, ICCV, and SPIE Conferences.

3. International and National Professional and Advisory Services

- **Vice President for Financial and Administrative Activities**, IEEE Circuits and Systems Society, 2016 – 2018
- **Hong Kong Research Grants Council, Panelist**, RGC Engineering Panel, 2015 – 2020
- **Member, Board of Governors**, IEEE Circuits and Systems Society, 2013 – 2015
- **European Research Council, Advanced Grant International Panelist** on Systems and Communication Engineering, Horizon 2020, 2014 –
- **European Research Council, Advanced Grant International Panelist** on Systems and Communication Engineering, FP7 Program, 2008 – 2014
- **Evaluator, Tan Kah Kee Science Award Foundation**, Chinese Academy of Science, 2013 – Present
- **Evaluator, Singapore President's Technology Award** Evaluation Committee, 2011 – Present
- **Evaluation Panelist, German Research Foundation DFG** (NSF equivalent), Program COIN – Communications in Interference Limited Networks, 2011, 2012
- **Panelist and Evaluator, Greece Ministry of Education** Research Program Thalys, 2011
- **Panelist and Evaluator, Greece Ministry of Education** Research Program Archimedes III, 2011
- **Panelist and Evaluator, China Ministry of Education**, National ChangJiang (Yangtze River) Chair Professor Program, 2007 – Present
- **Panelist and Senior Advisor, Singapore ASTAR** (Agency for Science, Technology and Research), Mobile Media Research Initiative, 2006 – 2010
- **Evaluator, Singapore National Medal of Technology** evaluation committee, 2007 – Present
- **Evaluation Panelist, German Research Foundation DFG** (NSF equivalent), Center of Excellence Initiative International Panel (Electrical Engineering), 2006, 2007
- **Panelist**, US NSF Biomedical Engineering Program Review Panel, 2000, 2005
- **Panelist**, US NSF ITR Program Wireless Communications Review Panel, 2000, 2001
- **Senior Advisor**, Chinese NSF Information and Electronics Division, June 1997 – Present
- **Proposal Reviewer**, US NSF equivalent of Norway, Austria, Australia, Canada and Korea
- **Member, IEEE Fellow Evaluation Committee**, IEEE Broadcasting Tech. Society, 2007
- **Chair, Fellow Nomination Committee**, IEEE Communications Society Technical Committee on Multimedia Communications, March 2006 – Present
- **Member**, IEEE Signal Processing Society Technical Committee on Multimedia Signal Processing, January 2003 – 2006
- **Member**, IEEE Circuits and Systems Society Technical Committee on Visual Signal Processing and Communications, July 1997 – Present.
- **Member**, IEEE Communications Society Technical Committee on Multimedia Communications, January 1999 – Present.
- **Member**, IEEE Communications Society Technical Committee on Personal Communications, January 1999 – Present.
- **Member**, Board of Directors, University of Science and Technology of China Alumni Foundation, 1997 – 1998.

4. University, College, and Department Service Activities

- **Member**, PolyU Academy of Interdisciplinary Research Management Committee, The Hong Kong Polytechnic University (PolyU), 2021 – Present

- Member, Department of Computing (COMP) Departmental Staffing Committee, 2021 – 2023
- Group Leader, PolyU COMP Research Group in Vision, Language, and Graphics, 2021 – Present
- Group Leader, PolyU COMP Subject Group in Multimedia and Human-Computer Interaction, 2021 – Present
- Entrepreneurship Coordinator, PolyU COMP Department entrepreneurship initiatives, 2022 – Present
- Chair, Dept. of Computer Science and Engineering Faculty Search Committee, SUNY at Buffalo, 2020 – 2021
- Chair, Dept. of Computer Science and Engineering Faculty Search Committee, SUNY at Buffalo, 2015 – 2017
- Chair, Dept. of Computer Science and Engineering Distinguished Speaker Committee, SUNY at Buffalo, 2010 – 2012
- Member, School of Engineering and Applied Sciences Promotion Committee, SUNY at Buffalo, 2009 – 2012
- Chair, Dept of Computer Science and Engineering Course Load Policy Committee, SUNY at Buffalo, 2009 – 2010
- Member, Dept. of Computer Science and Engineering Distinguished Speaker Committee, SUNY at Buffalo, 2008 – 2010
- Member, Dept. of Computer Science and Engineering Faculty Search Committee, SUNY at Buffalo, 2011 – 2014
- Director, Wireless Center of Excellence, Florida Institute of Technology (FIT)
- Member, FIT College of Engineering Promotion Committee, 2004, 2005
- Member, FIT College of Engineering ECE Department Head Search Committee, 2006
- Member, FIT ECE Department Computer Engineering Curriculum Committee
- Chair, FIT ECE Department Comprehensive Exam Committee
- Technical Reviewer, University Patents and Licensing, University of Missouri System, February 1998 – January 2001.
- Technical Reviewer, Research Board Grant Program, University of Missouri System, February 1998 – June 2003.
- Member, MU Life Science Mission Enhancement Fellowship Committee, 1999 – 2001.
- Member, MU College of Engineering International Engineering Committee, 1997 - 2000.
- Member, MU College of Engineering Annual Lectureship Committee, 1997 – 2001
- **First Place Winner**, MU College of Engineering Engineers Week Lab Exhibit Competition, 2000
- Chair, MU ECE Department Faculty Search Committee, 2002 – 2003
- Member, MU COE LaPierre Chair Professor Search Committee, 2000 – 2001
- Member, MU ECE Department Graduate Program Committee, Fall 1998 – Winter 2001.
- Chair, MU COE LaPierre Chair Professor Search Committee, 1999 – 2000
- Member, Department Ph.D. Qualifying Exam Committee for Communication and Signal Processing Area, September 1997 – December 2000
- Chair, Department Course and Curriculum Committee Subcommittee on Communications Elective Courses, 1996 – 2001.
- Member, 50+ Ph.D. dissertation and 30+ M.S. thesis committees, University of Rochester, University of Missouri-Columbia, Florida Institute of Technology, State University of New York at Buffalo, September 1992 – Present

RECENT GRANTS & CONTRACTS

Grants and Contracts in China

- Department of Science and Technology, Guangdong Province, China, Next Generation Artificial Intelligence Fundamental Research Fund, Project Director (PD) (Peng Cheng Laboratory, Shenzhen), Agile customizable intelligent vision processor system and applications, 01/01/2020 — 12/31/2022, RMB 20,000,000.00.
- National Natural Science Foundation of China, Principal Investigator (PI) (University of Science and Technology of China), Major Collaborative Project: Development of information transport modeling and associated key technical innovations for collaborative space and ground networking systems, 01/01/2016 — 12/31/2020, RMB 4,000,000.00.

Grants and Contracts in Hong Kong

- RGC GRF Grant (PI), Perception Inspired and First Principle Governed Visual Quality Assessment for Artificial Intelligence-Generated Content, 36 months, 01/01/2026 — 12/31/2028, HK\$ 1,068,006.00 Funded
- ByteDance Gift Fund (PI), Efficient Multi-modal Tokenization for Long Video Understanding, 18 months, 01/10/2026 – 30/06/2027, HK\$985,000.00 Funded
- RGC CRF Program (PC), Ground-air-satellite multimodal heterogeneous elastic fusion and AI-based city-scale traffic flow modeling and analytics, 36 months, HK\$ 9,000,000.00 Submitted
- RGC GRF Grant (PI), Investigating Scene Graph Generation as an Effective Semantic Communication Mechanism for Time-Critical and Task-Specific Internet-of-Video-Things, 36 months, 01/01/2024 — 12/31/2026, HK\$ 1,188,600.00 Funded
- RGC GRF Grant (PI), Investigating Reconfigurable Intelligent Surface Empowered Wireless Networking for Internet-of-Video-Things, 01/01/2023 — 12/31/2025, HKD1,086,185.00. Funded
- Hong Kong Jockey Club Charities Trust (Donation) (Co-PI), A Two-year AI-based Screening and Prevention Program on Knee Pain, 01/04/2022 — 01/03/2024, HKD1,045,500.00. Funded
- Tencent Mobility Limited (Donation) (PI), Multimodal Video Cover Page Generation, 01/04/2022 — 01/03/2024, HKD1,408,005.00. Funded
- SmartMore Gift Fund (PI), Investigation of Encoding Strategy for Super-Resolution Video, 01/01/2022 — 12/31/2023, HKD750,000.00. Funded
- Huawei Technologies Co. Ltd. (Collaborative) (PI), Investigation of Hierarchical Representation for Multi-Model Fusion, 01/01/2022 — 08/31/2023, HKD2,206,770.00. Funded

MAJOR TEACHING ACTIVITIES

1. Teaching Activities at the Hong Kong Polytechnic University

- COMP 6706 — Advanced Topics in Visual Computing — Fall 2021, 2022, Spring 2024, 2025
- COMP 5523 — Computer Vision and Image Processing — Spring 2022
- COMP 5425 — Multimedia Coding and Networking — Spring 2023

2. Teaching Activities at the State University of New York at Buffalo

- CSE 714 — Seminar: Advances in Multimedia Communications and Networking — Newly developed course, Spring 2008
- CSE 702 — Seminar: Advances in Distributed Multimedia Communications — Newly developed course, Spring 2009, Fall 2010, Fall 2011, Fall 2012, Fall 2103
- CSE 704 — Seminar: Advances in Mobile Cloud Media — Newly developed course, Spring 2015, Spring 2016, Spring 2017
- CSE 634 — Advanced Multimedia Systems — Newly updated course, Fall 2008
- CSE 534 — Introduction to Multimedia Systems — New course, Fall 2009, Fall 2010, Spring 2013, Spring 2014, Spring 2016, Spring 2017, Spring 2021
- CSE 473/573 — Introduction to Computer Vision and Image Processing, Fall 2011, Fall 2012, Fall 2013, Fall 2015, Fall 2016

2. Teaching Activities at the Florida Institute of Technology

- ECE 5238 — Error Control Coding —(Text: Lin and Costello), Fall 2003
- ECE 5118 — Wireless Sensor Networks — Newly developed course, Spring 2004, 2005, 2006, 2007
- ECE 5117 — Multimedia Communications — Newly course, Fall 2004, 2005, 2007
- ECE 3222 — Signals and Systems — (Text: Oppenheim and Willsky), Fall 2004, 2005, 2006, 2007

3. Teaching Activities at the University of Missouri-Columbia

- ECE 216 — Signals and Systems — (Text: Oppenheim and Willsky), Spring 2003
- ECE 301 — Introduction to Digital Communication — Newly developed course, Spring 1997, 1998
- EE 372 — Introduction to Communication Systems — Newly revised course, Winter 1998, 1999, 2000
- EE 401 —Wireless Multimedia Communications — Newly developed course, Winter 1999
- EE 472 — Advanced Communication Systems — Newly revised course, Fall 2000
- EE 477—Digital Signal Processing in Telecommunications —Newly developed course, (Text: Chen – Lecture Notes), Fall 1997, 1998, 1999
- EE 478 — Coding Theory and Applications — New course, Fall 1999, Fall 2000
- EE 482 — Probability and Random Processes for Engineers — New course, Winter 2000

4. Teaching Activities at the University of Rochester

- EE 447 — Digital Image Processing —(Text: Gonzalez & Woods), Springs 1993, 1994, 1995, 1996
- EE 547 — Seminars on Advanced Image Processing — (Lecture notes and journal papers), Falls 1993, 1994, 1995

5. Graduated Ph.D. & M.S. Students

Ph.D. Graduates:

- Jiebo Luo, Ph.D. Degree, F1995, University of Rochester (**Fellow, IEEE, SPIE, IAPR**)
Thesis: Low Bit-rate Wavelet-based Image and Video Compression with Adaptive Quantization, Coding and Postprocessing
Current Employer: Dept. of Computer Science (Full Professor), University of Rochester, Rochester, NY
- Li Fan, Ph.D. Degree, F2000, University of Missouri-Columbia
Thesis: 3D Reconstruction and Deformation Analysis from Medical Image Sequences with Applications in Left Ventricle and Lung
Current Employer: EDDA Technology Inc. (**Executive Vice President**), Princeton, NJ
- Lei Cao, Ph.D. Degree, S2002, University of Missouri-Columbia
Thesis: Error Resilient Image Coding and Wireless Communications
Current Employer: University of Mississippi (**Full Professor**), University, MS
- Jianfei Cai, Ph.D. Degree, S2002, University of Missouri-Columbia
Thesis: Robust Error Control and Optimal Bit Allocation for Image and Video Transmission over Wireless Channels
Current Employer: Monash University (**Full Professor and Head for the Data Science & AI Department**), Australia (**IEEE Fellow**)
- Min Wu, Ph.D. Degree, F2005, University of Missouri-Columbia
Thesis: Multimedia Data Transmission for Mobile Wireless Applications
Current Employer: MAKO Surgical Inc., (Research Manager) Fort Lauderdale, FL
- Daewon Song, Ph.D. Degree, F2007, Florida Institute of Technology
Thesis: Multimedia Communications over MIMO Systems
Current Employer: LG Electronics Research Laboratory, (**Senior Research Director**) Korea
- Guogang Hua, Ph.D. Degree, S2008, Florida Institute of Technology
Thesis: Distributed Source Coding and Its Applications in Wireless Sensor Networks and Video Compression
Current Employer: Qualcomm Inc., (**Senior Research Engineer**) San Diego, CA
- Byung Jung Oh, Ph.D. Degree, F2008, Florida Institute of Technology
Thesis: Supporting Multimedia Quality of Services in Wireless Networks
Current Employer: Samsung-Mobile Engineering Lab, (Senior Engineer) Bellevue, WA
- Chaorong Peng, Ph.D. Degree, F2008, Florida Institute of Technology
Thesis: Intelligent Routing Protocols for Mobile Ad Hoc Wireless Networks
Current Employer: Self-employed, New Jersey.
- Xinglei Zhu, Ph.D. Degree, F2012, State University of New York at Buffalo
Thesis: Optimal Authentication, Transmission and Access Control for Multimedia
Current Employer: Google Research (Research Engineer), Santa Clara, CA
- Shujie Liu, Ph.D. Degree, S2013, State University of New York at Buffalo
Thesis: Compression, Rendering, and Transmission for 3D and Scalable Video
Current Employer: Apple Research (Research Engineer), Cupertino, CA
- Wenyan Yin, Ph.D. degree, F2013, State University of New York at Buffalo
Thesis: Mobile Multimedia: from Acquisition to Adaptation with Semantics, Context and Social Information
Current Employer: Google Research (Research Scientist), Sunnyvale, CA
- Qian Liu, Ph.D. degree, F2013, State University of New York at Buffalo
Thesis: QoS Guaranteed Multimedia Transmission over Wireless Networks
Current Employer: Dalian University of Technology (Associate Professor), Dalian, China

- Jingteng Xue, Ph.D. degree, S2014, State University of New York at Buffalo Thesis: Perceptual Quality Driven Video Evaluation and Processing
Current Employer: Apple Research (Research Engineer), Cupertino, CA
- Hao Cui, PhD degree, S2014, University of Science and Technology of China
Thesis: Seamless Adaptation for Wireless Communications
Current Employer: Da-Jiang Innovations Research (Research Engineer), Shanghai, China
- Dan Miao, PhD degree, F2015, University of Science and Technology of China
Thesis: Research on 3D Video Compression, Transmission and Rendering
Current Employer: Huawei 2012 Innovation Lab (Research Engineer), Santa Clara, CA
- Panya Chanawangsa, Ph.D. degree, S2016, State University of New York at Buffalo
Thesis: Computer Vision for Advanced Driver Assistance and Intelligent Transportation Systems; Current Employer: Amazon Research (Research Engineer), Seattle, WA
- Jie Hu, Ph.D. degree, S2016, State University of New York at Buffalo
Thesis: Image Based View Rendering from Un-calibrated Cameras
Current Employer: Sony US Research Center (Senior Research Engineer), San Jose, CA
- Zhisheng Yan, Ph.D. degree, S2016, State University of New York at Buffalo
Thesis: Sustained Mobile Visual Computing: A Human-Centric Perspective
Current Employer: Georgia State University (Assistant Professor), Atlanta, GA
- Changsha Ma, Ph.D. Degree, F2017, State University of New York at Buffalo
Thesis: Security and Privacy Issues in Cloud Media and Social Media Application
Current Employer: Start-up Company in Bay Area (Chief Architect), San Jose, CA, USA
- Yu Liu, Ph.D. Degree, F2017, State University of New York at Buffalo
Thesis: Media Recommendation with Mobile and Social Networking Augmentations
Current Employer: Citadel Securities (Research Scientist), Chicago, IL USA
- Zhiqiang Liu, Ph.D. Degree, S2018, University of Science and Technology of China
Thesis: Resource Allocation Strategy in Wireless Body Area Networks
Current Employer: Huawei Technologies (Research Engineer), Hangzhou, China
- Hao Wu, Ph.D. Degree, F2019, University of Science and Technology of China
Thesis: Resource Optimization Techniques in Edge Caching Based Dense Wireless Networks
Current Employer: Huawei Technologies (Research Engineer), Shanghai, China
- Shuang Ma, Ph.D. Degree, F2019, State University of New York at Buffalo
Thesis: Learning to Build Multimodal Intelligence across Vision, Language and Speech
Current Employer: Microsoft Research (Senior Research Scientist), Seattle, WA USA
- Xiaoda Jiang, Ph.D. Degree, S2020, University of Science and Technology of China
Thesis: Resource Optimization Mechanism for Wireless Video Transmission
Current Employer: TBA
- Radhakrishna Dasari, Ph.D. Degree, S2020, State University of New York at Buffalo
Thesis: Multi-Sensor Fusion for Fast and Robust Computer Vision Applications
Current Employer: University of Vermont (Assistant Professor), Burlington, VT
- Tao Wei, Ph.D. Degree, F2021, State University of New York at Buffalo
Thesis: Network Morphism and Its AutoML Applications,
Current Employer: OPPO Research at Seattle, Seattle, WA
- Peipei Zhu, Ph.D. Degree, F2023, The Chinese University of Hong Kong, Shenzhen
Thesis: Multi-Modal Knowledge Discovery for Cost-Effective Caption Generation
Current Employer: North China Electric Power University, Baoding, China
- Yong Zhang, Ph.D. Degree, F2023, The Chinese University of Hong Kong, Shenzhen
Thesis: Structured Representation for Visual Data and Its Applications
Current Employer: Shenzhen University (Assistant Professor), Shenzhen, China

- Rui Zhu, Ph.D. Degree, F2024, The Chinese University of Hong Kong, Shenzhen
Thesis: Self-supervised Representation Learning for Visual Understanding
Current Employer: ByteDance Seed (Researcher),
- Xiaotong YU, Ph.D. Degree, S2025, The Hong Kong Polytechnic University
Thesis: Intelligent Perception Systems for Mobile Robot: From Semantic-aware Planning to Hybrid Quantum-Classical View Optimization
Current Employer: National University of Defense Technology (Assistant Professor), Hefei, China
- Dingbang LIU, Ph.D. Degree, S2025, The Hong Kong Polytechnic University
Thesis: Energy Efficient Computing-In-Memory Accelerators For Deep Learning
Current Employer: Hunan University (Assistant Professor), Changsha, China

M.S. Graduates: (50+ Total; Average 2-3/year)

6. Ph.D. Students Currently under Supervision

- Ye LIU, Video Analytics for Cover Page Generation,
Expected degree date: June 2025 (The Hong Kong Polytechnic University)
- Fengbo LAN, Investigation of Super-Resolution Video Encoding and Transmission,
Expected degree date: June 2026 (The Hong Kong Polytechnic University)
- Zuyao CHEN, 3D Computer Vision via Deep Learning
Expected degree date: June 2026 (The Hong Kong Polytechnic University)
- Tianyu Huang, Inverse Rendering for Realistic 3D Presentations
Expected degree date: June 2026 (The Hong Kong Polytechnic University)
- Juwei SHEN, Brain-Inspired Spiking Neural Network for Event Detection
Expected degree date: June 2027 (The Hong Kong Polytechnic University)
- Guanchen DING, Semantic Communication with Vision Intelligence
Expected degree date: June 2027 (The Hong Kong Polytechnic University)
- Hu ZHU, Structure-Aware 3D Scene Analysis and Synthesis
Expected degree date: June 2027 (The Hong Kong Polytechnic University)
- Tao YANG, Perception-aware Multimodal Content Generation
Expected degree date: June 2027 (The Hong Kong Polytechnic University)
- Ruixiang JIANG, Multimodal Reasoning for Aesthetics in Artistic Content Generation
Expected degree date: June 2028 (The Hong Kong Polytechnic University)
- Nannan WU, Video Object Counting with Concept Graphs
Expected degree date: June 2028 (The Hong Kong Polytechnic University)
- Yuntao WEI, Semantic-integrity Based Visual Representation
Expected degree date: June 2028 (The Hong Kong Polytechnic University)
- Bing WU, Hierarchical 3D Scene Graph Construction for Zero-Shot Semantic Navigation
Expected degree date: June 2028 (The Hong Kong Polytechnic University)
- Yanshuo WANG, Personalized Egocentric Video Understanding
Expected degree date: June 2029 (The Hong Kong Polytechnic University)
- Junyan LIN, Vision-Language-Action Models and 3D-to-Video Generation
Expected degree date: June 2029 (The Hong Kong Polytechnic University)

7. Post-Doctoral Fellow Supervision

- Dr. Yaosi HU, November 2023 – Present, The Hong Kong Polytechnic University.
Research in Generative AI with Focus on Text-Image and Text-to-Video

- Dr. Yang Mi, November 2022 – October 2024, The Hong Kong Polytechnic University, Research in Gait Analysis for Knee Health Monitoring and Treatment, Current Position: TheSEA Inc. (Researcher)
- Dr. Bruce Xinbo YU, February 2022 – March 2024, The Hong Kong Polytechnic University, Research in 3D Video Analytics, Current Position: ZJU-UIUC Institute (Assistant Professor)
- Dr. Lingbo LIU, September 2021 – December 2023, The Hong Kong Polytechnic University, Research in Hierarchical Representation for Multi-Model Fusion, Current Position: Peng Cheng Lab (Senior Researcher)
- Dr. Lulin Chen, May 1995 - December 1996, Research in Image Enhancement and Image and Video Coding, Current Position: Principal Research Engineer and Manager, Media Tech, Santa Clara, CA
- Dr. Yue Yu, November 1998 - April 2001, Research in Texture Image Analysis and Synthesis, Current Position: Senior Researcher, Motorola Broadband Research, San Diego, CA
- Dr. Yu Wang, September 2003 – November 2004, Research in Novel Routing and MAC Protocols for Wireless Sensor Networks, Current Position: Motorola Research Labs, Chicago, IL
- Dr. Wei Pu, March 2010 – September 2012, Research in Multimedia over Dynamic Adaptive Streaming over HTTP, Current Position: Qualcomm Multimedia R&D and Standards Group
- Dr. Tiesong Zhao, January 2014 – July 2015, Research in Quality of Experience for Video Coding and Networking, Current Position: Full Professor, Fuzhou University, China
- Dr. Lei Yu, March 2016 – 2018, Research in Network Information Theory and Applications, Current Position: Postdoc Fellow at National University of Singapore

8. Visiting Professors / Research Assistants

8.1. Visiting Professors:

- Prof. Fuqiang Yao, September 2000 – March 2001, Research in Broadband Communication, Current Position: Director, Nanjing Institute of Science and Technology, Nanjing China
- Prof. Guorui Jiang, September 2000 – September 2001, Research in Information Technology, Current Position: Deputy Dean, School of Business Management, Beijing University of Technology, Beijing China
- Prof. Peter Reamy, September 2004 – March 2005, Research in Broadband Communication, Current Position: Professor at Berne University of Applied Sciences, Switzerland
- Prof. Rongke Liu, April 2005 – April 2006, Research in Video Communication, Current Position: Deputy Dean, School of Information Technology, Beihang University, Beijing China
- Mr. Tao Sheng, November 2007 – November 2008, Research in Distributed Video Coding, Current Position: Senior Engineer at Qualcomm Canada, Toronto, Canada
- Ms. Zhenyu Wu, July 2009 – July 2010, Research in Video Transcoding for Mobile Transmission, Senior Lecture at University of Electronic Science and Technology, Chengdu, China

- Prof. Lifang Wu, September 2009 – August 2010, Research in Video Analysis for Tracking Articulated Objects, Deputy Dean, College of Electronic Information and Control Engineering, Beijing University of Technology
- Prof. Hancheng Lu, April 2010 – April 2011, Research in Network Coding for Efficient Media Delivery over Vehicular Networks, Professor at University of Science and Technology of China
- Dr. Wenchao Yang, April 2012 – April 2013, Research in Mobile IPV6 for Robust Video Streaming over Wireless Networks, Lecturer at Harbin Institute of Technology
- Prof. Yang Cao, October 2013 – December 2014, Research in Computer Vision and Video Processing, Professor at University of Science and Technology of China
- Prof. Shuai Fang, October 2013 – December 2014, Research in Image Processing and Dehazing based on Optical Principles, Professor at Hefei University of Technology
- Prof. Li Zhang, February 2014 – February 2015, Research in MANET and Named Domain Networks, Professor at Beijing University of Technology
- Wengang Chen, April 2014 – April 2015, Research in Color Makeover with Crowd Sourcing and Aesthetics, Professor at North China Electric Power University

8.2. Current Research Assistants:

- Fan Wang, November 2021 – Present, Research in Video Cover Page Layout Design via Deep Learning
- Zongyan Han, May 2022 – Present, Research in Visual Attribute Transformer for Zero-Shot Learning
- Guanchen Ding, August 2022 – January 2023, Research in Deep Learning based Video Super-resolution
- Junfan Lin, October 2022 – Present, Research in Deep Learning based Text to Motion Generation
- Tao Yang, February 2023 – Present, Research in Video Cover Page Design via Rule-Based and Deep Learning Approaches

9. Graduate Research Mentoring Recognitions

- Ph.D. Student Zhisheng Yan, Recipient of **2018 ACM SIGMM Best Dissertation Award**, August, 2018
- Ph.D. Student Zhisheng Yan, Recipient of State University of New York at Buffalo Department of Computer Science and Engineering **Best Dissertation Award**, July 2017
- Ph.D. Student Zhisheng Yan, Recipient of **David M. Benenson Memorial Scholarship**, State University of New York at Buffalo, 2016
- Ph.D. Student Shujie Liu, Finalist of **Microsoft Research Fellowship**, 2011 (Among 22 selected from 300+ applicants US nationwide)
- Recipient of 2005 **Outstanding Supervisor Award** at Florida Institute of Technology
- Recipient of 2003 **Sigma Xi Excellence in Graduate Research Mentoring Award** at the University of Missouri-Columbia, March 2003
- Finalist for 2000 **Sigma Xi Excellence in Graduate Research Mentoring Award** at the University of Missouri-Columbia
- Ph.D. Student Min Wu, Finalist of **AAMI Young Investigator Competition**, June 2003.
- Ph.D. Student Lei Cao, Recipient of **Superior Graduate Achievement Award**, (2000), University of Missouri-Columbia Graduate College.

- Ph.D. Student Li Fan, Recipient of **SPIE Educational Scholarship Award**, (1999), and **Outstanding Graduate Student Award**, (1999), College of Engineering, University of Missouri-Columbia.
- Ph.D. Student Jianfei Cai, Recipient of **Superior Graduate Achievement Award**, (1998), University of Missouri-Columbia Graduate College.

PUBLICATIONS

(Total: 7 Books, 10 Book Chapters, 170+ Journal Papers, 270+ Conf. Papers, 10 Patents)

Books:

1. Jun Yu, Changwei Luo, Chang Wen Chen, Editors, *Multi-Modal Human Modeling, Analysis and Synthesis*, Routledge: Taylor and Francis Group, UK 2026
2. C. W. Chen, P. Chatzimisios, T. Dagiuklas and L. Atzori, editors, *Multimedia Quality of Experience (QoE): Current Status and Future Requirements*, John Wiley & Sons, Ltd. West Sussex, UK 2016
3. C. W. Chen, editor, *Visual Communications and Networking*, University of Science and Technology of China Press, Hefei, China, 2012
4. X. Jiang, M. Y. Ma and C. W. Chen, editors, *Mobile Multimedia Processing*, Springer Verlag Publisher, Heidelberg, Germany, 2010
5. S. Lian, Z. Li and C. W. Chen, editors, *Intelligent Multimedia Transmission: Techniques and Applications*, Springer Verlag Publisher, Heidelberg, Germany, 2011
6. A. Bovik, C.W. Chen and D. Goldgof, *Advances in Image Processing and Understanding: A Festschrift for Thomas S. Huang*, World Scientific Publisher, 2001.
7. C.W. Chen and Y. Q. Zhang, editors, *Visual Information Representation, Communication, and Image Processing*, Marcel Dekker Publisher, New York, NY, 1999.

Book Chapters:

1. C. W. Chen, "Emerging technologies in multimedia communications and networking: challenges and research opportunities," in *Multimedia Image and Video Processing*, Edited by L. Guan, S. Y. Kung, and Y. He, Taylor & Francis Publisher, 2011
2. C. W. Chen and Z. He, "Wireless Video Communication under Resource Constraints," in *Encyclopedia of Multimedia*, Edited by B. Furht, Springer Publisher, 2006
3. M. Wu and C. W. Chen, "Multiple bitstream image transmission over wireless sensor networks," in *Sensor Network Operations*, S. Phoha, T. F. La Porta and C. Griffin, Editors, Wiley, John & Sons, 2006
4. C. W. Chen, Z. Sun, H. Li, J. Cai and L. Cao, "Image transmission over noisy channels: TCQ-based coding schemes," *Advances in Image Processing and Understanding: A Festschrift for Thomas S. Huang*, A. Bovik, C. W. Chen and D. Goldgof, editors, World Scientific Publisher, June, 2001.
5. L. Fan and C. W. Chen, "Telemedicine: A multimedia communication perspective," in *Multimedia Image and Video Processing*, edited by Ling Guan, Sun-Yuan Kung and Jan Larsen, CRC Press, Boca Raton, FL, 1999.
6. C. W. Chen and Y. Q. Zhang, "Recent advances in visual communication and image processing" in *Visual Information Representation, Communication, and Image Processing*, C. W. Chen and Y. Q. Zhang, editors, Marcel Dekker Publisher, New York, NY, May, 1999.

7. J. Luo and C. W. Chen, "Adaptive quantization in wavelet-based image and video coding" in *Visual Information Representation, Communication, and Image Processing*, C. W. Chen and Y. Q. Zhang, editors, Marcel Dekker Publisher, New York, NY, May, 1999.
8. C. W. Chen, "Telemedicine" in *Wiley Encyclopedia of Electrical and Electronics Engineering*, J. G. Webster, editor, John Wiley & Sons, Inc., Publishers, New York, NY, 1998.
9. L. Chen and C. W. Chen, "A cellular connectionist architecture for clustering-based adaptive quantization with application to video coding," in *Multimedia Communication & Video Coding*, Y. Wang, S. Panwar, S-P Kim and H. L. Bertoni, editors, Plenum Press, New York, NY, pp. 333-340, 1996.
10. C. W. Chen and T. S. Huang, "A new algorithm for motion/structure estimation using error probability," in *Time-varying Image Processing and Moving Object Recognition*, 2, V. Cappellini, editor, Elsevier Science Publishers B. V. Amsterdam, pp. 250-257, 1990.

Journal Editorials:

1. S. Winkler, C. W. Chen, A. Raake, P. Schelkens, L. Skorin-Kapov, "Introduction to the Special Issue on Measuring Quality of Experience for Advanced Media Technologies and Services," *IEEE Journal of Selected Topics in Signal Processing*, Vol. 11, No. 1, pp. 3-5 January 2017
2. C. W. Chen, "On Building a Stronger Multimedia Community," *IEEE Trans. On Multimedia*, Vol. 18, No. 1, January 2016
3. C. W. Chen, X. Zhu, Y. Wen and J. J. P. C. Rodrigues, "Guest Editorial - Special section on cloud-based mobile media: Infrastructure, services, and applications," *IEEE Trans on Multimedia*, Vol. 15, No. 4, pp. 721-722, June 2013
4. M. G. Martini, C. W. Chen, Z. Chen, T. Dagiuklas, L. Sun, X. Zhu. "Guest Editorial: QoE-Aware Wireless Multimedia Systems," *IEEE Journal on Selected Areas in Communications*, Vol. 30, No. 7, pp. 1153-1156, August 2012
5. L. Atzori, C. W. Chen, T. Dagiuklas and H. R. Wu, "Guest Editorial: QoE management in emerging multimedia services," *IEEE Communications Magazine*, Vol. 50, No. 4, pp. 18-19, April 2012
6. X. Yang, N. Ling, W. Zhang, C. W. Chen, "Guest Editorial: Special Issue on SoC for Multimedia Networking (SiPS 2007)," *Signal Processing Systems* Vol. 60, No. 3, pp. 269-271, 2010
7. C. W. Chen, S. Gritzalis, P. Lorenz, S. Lian, "Special issue on multimedia networking and security in convergent networks," *Computer Communications* Vol. 33, No. 14, pp. 1575-1577, 2010
8. C. W. Chen, W. Zeng and R. Steinmetz, "Scanning the Issue: Recent Advances in Distributed Multimedia Communications," *Proceedings of IEEE*, Vol. 96, No. 1, January 2008
9. P. Frossard, C. W. Chen, C. J. Sreenan, K. P. Subbalakshmi, D. O. Wu, Q. Zhang, "Guest Editorial: Cross-layer Optimized Wireless Multimedia Communications," *IEEE Journal on Selected Areas in Communications* Vol. 25, No. 4, pp. 641-644, 2007
10. C. W. Chen, "Multimedia Communications: Paradigm Shifting Technologies and Applications," *China Communications Journal*, Vol. 3, pp. 5, October 2006
11. C. W. Chen, "Message from the Editor-in-Chief," *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 16, pp. 321, March 2006
12. C. W. Chen, "Message from Incoming Editor-in-Chief," *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 16, pp. 1, January 2006

13. C. W. Chen, M. Ghanbari and K. N. Ngan, "Guest Editorial: Visual Communication in the Ubiquitous Era," *Journal of Visual Communication and Image Representation*, Vol. 16, pp. 393-396, June 2005.
14. C. W. Chen, "Panorama of Multimedia Coding and Processing," *IEEE MultiMedia Magazine*, Vol. 11, No. 3, pp. 111- 112, July 2004.
15. Y. Altunbasak, C. W. Chen, M. R. Civanlar and K. N. Ngan, "Guest Editorial: Recent advances in wireless video," *Signal Processing: Image Communication*, Vol. 18, No. 10, pp. 857-860, November 2003.
16. C. W. Chen and J. Luo, "Guest Editorial: Special Issue on Multimedia over Mobile IP," *Journal of Wireless Communications and Mobile Computing*, Vol. 2, No. 6, pp. 549-552, September 2002.
17. C. W. Chen, R. L. Lagenduk, A. Reibman and W. Zhu, "Guest Editorial: Introduction to the special issue on wireless video," *IEEE Trans. Circuits and Systems for Video Technology* special issue in wireless video, Vol. 12, No. 6, pp. 511-523, June 2002.
18. C. W. Chen, P. Cosman, N. Kingsbury, J. Liang and J. Modestino, "Guest Editorial: Error Resilient Image and Video Transmission," *IEEE Journal on Selected Areas in Communications*, Vol. 18, No. 6, pp. 809-812, June 2000.

Journal Papers

1. Y. Zheng, K. Luo, S. Liu, Z. Li, Y. Xiang, L. Wu, B. Zeng, C. W. Chen, "GLOCAL: A self-supervised learning framework for global and local motion estimation," *Pattern Recognition Letters*, Volume 178, 2024, Pages 91-97, ISSN 0167-8655, <https://doi.org/10.1016/j.patrec.2023.12.024>.
2. D. Tu, W. Shen, W. Sun, X. Min, G. Zhai and C. Chen, "Un-Gaze: A Unified Transformer for Joint Gaze-Location and Gaze-Object Detection," in *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 34, no. 5, pp. 3271-3285, May 2024, doi: 10.1109/TCSVT.2023.3318839.
3. P. Zhu, X. Wang, L. Zhu, Z. Sun, W-S. Zheng, Y. Wang and C. W. Chen, "Prompt-Based Learning for Unpaired Image Captioning," *IEEE Transactions on Multimedia*, vol. 26, pp. 379-393, 2024, doi: 10.1109/TMM.2023.3265842.
4. Y. Zhang, Y. Pan, T. Yao, R. Huang, T. Mei and C. -W. Chen, "End-to-End Video Scene Graph Generation With Temporal Propagation Transformer," in *IEEE Transactions on Multimedia*, vol. 26, pp. 1613-1625, 2024, doi: 10.1109/TMM.2023.3283879.
5. H. Wang, Z. Chen and C. W. Chen, "Learned Video Compression via Heterogeneous Deformable Compensation Network," in *IEEE Transactions on Multimedia*, vol. 26, pp. 1855-1866, 2024, doi: 10.1109/TMM.2023.3289763.
6. Z. Chen, H. Wang and C. W. Chen, "Self-Supervised Video Representation Learning by Serial Restoration With Elastic Complexity," in *IEEE Transactions on Multimedia*, vol. 26, pp. 2235-2248, 2024, doi: 10.1109/TMM.2023.3293727.
7. Z. Zhao, B. Liu, Y. Lu, Q. Chu, N. Yu and C. W. Chen, "Joint Identity-Aware Mixstyle and Graph-Enhanced Prototype for Clothes-Changing Person Re-Identification," in *IEEE Transactions on Multimedia*, vol. 26, pp. 3457-3468, 2024, doi: 10.1109/TMM.2023.3311143.
8. S. Sun, D. Huang, X. Tao, C. Pan, G. Liu, and C. W. Chen. 2023. Boosting Scene Graph Generation with Contextual Information. *ACM Trans. Multimedia Comput. Commun. Appl.* 20, 2, Article 54 (February 2024), 24 pages. <https://doi.org/10.1145/3615868>
9. Q. Zhu, R. Liu, Z. Wang, Q. Liu and C. Chen, "Sensing-Communication Co-Design for UAV Swarm-Assisted Vehicular Network in Perspective of Doppler," in *IEEE*

- Transactions on Vehicular Technology*, vol. 73, no. 2, pp. 2578-2592, Feb. 2024, doi: 10.1109/TVT.2023.3315868.
10. R. Liu, Y. Xu, Y. Wu, D. He, W. Zhang and C. W. Chen, "Detecting Abrupt Channel Changes for IRS-Assisted MIMO Communication," in *IEEE Wireless Communications Letters*, vol. 13, no. 1, pp. 29-33, Jan. 2024, doi: 10.1109/LWC.2023.3316700.
 11. R. Liu, L. Liu, Y. Xu, D. He, W. Zhang and C. W. Chen, "Detecting Abrupt Change of Channel Covariance Matrix in IRS-Assisted Communication," in *IEEE Wireless Communications Letters*, vol. 13, no. 2, pp. 318-322, Feb. 2024, doi: 10.1109/LWC.2023.3328456.
 12. F. Gao, R. Zhang, J. Tang, S. Liu, W. Li, J. Yu, C. W. Chen, and H. Zheng. "Pin-CasNet: Detecting pin status in transmission lines based on cascade network," *Engineering Application Artificial Intelligence*, 127, PB (Jan 2024). <https://doi.org/10.1016/j.engappai.2023.107244>
 13. C. Zhang, H. Lu and C. W. Chen, "Reconfigurable Intelligent Surfaces-Enhanced Uplink User-Centric Networks on Energy Efficiency Optimization," *IEEE Transactions on Wireless Communications*, Vol. 22, No. 12, 9013-9028, December 2023
 14. P. Zhu, X. Wang, L. Zhu, Z. Sun, W.-S. Zheng, Y. Wang, and C. W. Chen, "Prompt-Based Learning for Unpaired Image Captioning," *IEEE Transactions on Multimedia*, Vol. 26, 2024, doi: 10.1109/TMM.2023.3265842.
 15. T. Li, H. Wang, B. He, C. W. Chen, "Knowledge-Enriched Attention Network With Group-Wise Semantic for Visual Storytelling," *IEEE Trans. Pattern Anal. Mach. Intell.* 45(7): 8634-8645, July 2023
 16. L. Wu, X. Lang, Y. Xiang, C. W. Chen, Z. Li, Z. Wang, "Active Spatial Positions Based Hierarchical Relation Inference for Group Activity Recognition," *IEEE Trans. Circuits Syst. Video Technol.* 33(6): 2839-2851, June 2023
 17. J. Huang, B. Liu, C. Miao, Y. Lu, Q. Zheng, Y. Wu, J. Liu, L. Su, C. W. Chen, "PhaseAnti: An Anti-Interference WiFi-Based Activity Recognition System Using Interference-Independent Phase Component," *IEEE Trans. Mob. Comput.* 22(5): 2938-2954, May 2023
 18. Y. Zhang, Y. Pan, T. Yao, R. Huang, T. Mei, C. W. Chen, "Boosting Scene Graph Generation with Visual Relation Saliency," *ACM Trans. Multimedia Computing, Communication and Applications*, Vol. 19, No. 1, pp. 1-17, 2023
 19. T. Wei, Y. Tian, Y. Wang, Y. Liang and C. W. Chen. "Optimized separable convolution: Yet another efficient convolution operator." *AI Open* 3 (2022): 162-171.
 20. X. Min, K. Gu, G. Zhai, X. Yang, W. Zhang, P. Le Callet and C. W. Chen, "Screen Content Quality Assessment: Overview, Benchmark, and Beyond," *ACM Computing Surveys*. 54(9): 187:1-187:36 (2022)
 21. Y. Gui, H. Lu, F. Wu and C. W. Chen, "LensCast: Robust Wireless Video Transmission Over MmWave MIMO With Lens Antenna Array," *IEEE Trans. Multimedia*, 24: 33-48 (2022)
 22. Z. Zhang, M. Li, H. Xie, J. Yu, T. Liu and C. W. Chen, "TWGAN: Twin Discriminator Generative Adversarial Networks," *IEEE Trans. Multimedia*. 24: 677-688 (2022)
 23. Y. Chen, T. Zhao, P. Cheng, M. Ding and C. W. Chen, "Joint Front-Edge-Cloud IoVT Analytics: Resource-Effective Design and Scheduling," *IEEE Internet Things J.* 9(23): 23941-23953 (2022)
 24. T. Wei, A. I. Avilés-Rivero, S. Wang, Y. Huang, F. J. Gilbert, C.-B. Schönlieb and C. W. Chen, "Beyond fine-tuning: Classifying high resolution mammograms using function-preserving transformations," *Medical Image Anal.* 82: 102618 (2022)
 25. N. Gao, Y. Xu, Y. Huang, H. Hong, D. He and C. W. Chen and W. Zhang, "Shortening for LDPC-Coded Multi-User Systems," *IEEE Communications Letters*. 25(7): 2138-2141 (2021)

26. A. Huang, W. Chen, T. Zhao and C. W. Chen, "Joint Learning of Latent Similarity and Local Embedding for Multi-View Clustering," *IEEE Trans. Image Process.* 30: 6772-6784 (2021)
27. Y. Gui, H. Lu, F. Wu and C. W. Chen, "Robust Video Broadcast for Users With Heterogeneous Resolution in Mobile Networks," *IEEE Trans. Mobile Computing.* 20(11): 3251-3266 (2021)
28. N. Gao, Y. Xu, Y. Huang, D. He, H. Hong, C. W. Chen and W. Zhang, "User-Load-Compatible Masking Schemes for Raptor-Like Protograph-Based LDPC Codes in Gaussian Multiple Access Channels," *IEEE Trans. Veh. Technol.* 70(8): 7652-7664 (2021)
29. F. Guo, H. Lu, X. Jiang, M. Zhang, J. Wu and C. W. Chen, "QoS-Aware User Grouping Strategy for Downlink Multi-Cell NOMA Systems," *IEEE Trans. Wirel. Commun.* 20(12): 7871-7887 (2021)
30. Z. Gu, H. Lu, M. Zhang, H. Sun and C. W. Chen, "Association and Caching in Relay-Assisted mmWave Networks: A Stochastic Geometry Perspective," *IEEE Trans. Wirel. Commun.* 20(12): 8316-8332 (2021)
31. F. Guo, H. Lu, B. Li, D. Li and C. W. Chen, "NOMA-Assisted Multi-MEC Offloading for IoVT Networks," *IEEE Wirel. Commun.* 28(4): 26-33 (2021)
32. X. Zhang, P. Gao, S. Liu, K. Zhao, G. Li, L. Yin and C. W. Chen. "Accurate and Efficient Image Super-Resolution via Global-Local Adjusting Dense Network," *IEEE Trans. Multimedia*, 2021
33. M. Li, Z. Zhang, J. Yu and C. W. Chen, "Learning Face Image Super-Resolution Through Facial Semantic Attribute Transformation and Self-Attentive Structure Enhancement," *IEEE Trans. Multimedia*, Vol. 23, No. 4, pp. 468-483, March 2021
34. T. Wei, C. Wang and C. W. Chen, "Modularized Morphing of Deep Convolutional Neural Networks: A Graph Approach," *IEEE Trans. Computers*, Vol. 70, No. 2, pp. 305-315, February 2021
35. H. Lu, X. Jiang and C. W. Chen, "Distortion-Aware Cross-Layer Power Allocation for Video Transmission Over Multi-User NOMA Systems," *IEEE Transactions on Wireless Communications*, Vol. 20, No. 2, pp. 1076-1092, February 2021
36. Q. Liu, Z. Yan and C. W. Chen, "Integrating Mobile Display Energy Saving into Cloud-Based Video Streaming via Rate-Distortion-Display Energy Profiling," *IEEE Trans. Cloud Computing*, Vol. 8, No. 4, pp. 1250-1263, December 2020
37. L. Wu, Z. Yang, Q. Wang, M. Jian, B. Zhao, J. Yan and C. W. Chen, "Fusing motion patterns and key visual information for semantic event recognition in basketball videos," *Neurocomputing*, Vol. 413, pp. 217-229, November 2020
38. G. Xiao, J. Ma, S. Wang and C. W. Chen, "Deterministic Model Fitting by Local-Neighbor Preservation and Global-Residual Optimization," *IEEE Trans. Image Processing*, Vol. 29, pp. 8988-9001, September 2020
39. Y. Gui, H. Lu, X. Jiang, F. Wu, C. W. Chen, "Compressed Pseudo-Analog Transmission System for Remote Sensing Images Over Bandwidth-Constrained Wireless Channels," *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 30, No. 9, pp. 3181-3195, September 2020
40. C. W. Chen, "Internet of Video Things: Next-Generation IoT with Visual Sensors," *IEEE Internet of Things Journal*, Vol. 7, No. 8, pp. 6676-6685, August 2020
41. H. Wu, H. Lu, F. Wu and C. W. Chen, "Energy and Delay Optimization for Cache-Enabled Dense Small Cell Networks," *IEEE Trans. Vehicular Technology*, Vol. 69, No. 7, pp. 7663-7678, July 2020
42. L. Wu, Z. Yang, J. He, M. Jian, Y. Xu, D. Xu and C. W. Chen, "Ontology-Based Global and Collective Motion Patterns for Event Classification in Basketball Videos,"

- IEEE Trans. Circuits and Systems for Video Technology*, Vol. 30, No. 7, pp. 2178-2190, July 2020
43. N. Gao, Y. Xu, D. He, S.-I. Park, H. Hong, H. Ju, C. W. Chen and W. Zhang, "Min-Sum Algorithm Using Multi-Edge-Type Normalized Scheme for ATSC 3.0 LDPC Decoders," *IEEE Trans. Broadcasting*, Vol. 66, No. 3, pp. 729-736, March 2020
 44. J. Yu, Q. Ling, C. Luo and C. W. Chen, "Synthesizing 3D Trump: Predicting and Visualizing the Relationship Between Text, Speech, and Articulatory Movements," *IEEE/ACM Trans. Audio, Speech & Language Processing*, Vol. 27, No. 12, pp. 2223-2233, December 2019
 45. C. Luo, J. Zhang, J. Yu, C. W. Chen and S. Wang, "Real-Time Head Pose Estimation and Face Modeling From a Depth Image," *IEEE Trans. Multimedia*, Vol. 21, No. 10, pp. 2473-2481, October 2019
 46. F. Lu, Y. Dong and C. W. Chen, "Layered Decoding Algorithm and Two-Level Quasi-Cyclic Matrix Construction for Rate Compatible Modulation," *IEEE Trans. on Circuits and Systems – I*, Vol. 66, No. 8, pp. 3213-3226, August 2019
 47. C. Ma, Z. Yan and C. W. Chen, "SSPA-LBS: Scalable and Social-Friendly Privacy-Aware Location-Based Services," *IEEE Trans. Multimedia*, Vol. 21, No. 8, pp. 2146-2156, August 2019
 48. Y. Lou, L.-Y. Duan, S. Wang, Z. Chen, Y. Bai, C. W. Chen and W. Gao, "Front-End Smart Visual Sensing and Back-End Intelligent Analysis: A Unified Infrastructure for Economizing the Visual System of City Brain," *IEEE Journal on Selected Areas in Communications*, Vol. 37, No. 7, pp. 1489-1503, July 2019
 49. Y. Ren, Z. Fang, D. Liu and C. W. Chen, "Replay attack detection based on distortion by loudspeaker for voice authentication," *Multimedia Tools and Applications*, Vol. 78, No. 7, pp. 8383-8396, July 2019
 50. Z. Yan, M. Zhao, C. Westphal and C. W. Chen, "Toward Guaranteed Video Experience: Service-Aware Downlink Resource Allocation in Mobile Edge Networks," *IEEE Trans. Circuits and System for Video Technology*, Vol. 29, No. 6, pp. 1819-1831, June 2019
 51. F. Zhao, J. Fan, H. Liu, R. Lan and C. W. Chen, "Noise Robust Multi-objective Evolutionary Clustering Image Segmentation Motivated by the Intuitionistic Fuzzy Information," *IEEE Trans. Fuzzy Systems*, Vol. 27, No. 2, pp. 387-401, February 2019
 52. H. Lu, Y. Gui, X. Jiang, F. Wu and C. W. Chen, "Compressed Robust Transmission for Remote Sensing Services in Space Information Networks," *IEEE Wireless Communications*, Vol. 26, No. 2, pp. 46-54, February 2019
 53. C. Ma, Z. Yan and C. W. Chen, "Scalable Access Control For Privacy-Aware Media Sharing," *IEEE Trans. Multimedia*, Vol. 21, No. 1, pp. 173-183, January 2019
 54. Z. Liu, B. Liu and C. W. Chen, "Joint Power-Rate-Slot Resource Allocation in Energy Harvesting-Powered Wireless Body Area Networks," *IEEE Trans. Vehicular Technology*, Vol. 67, No. 12, pp. 12152-12164, December 2018
 55. Z. Yan, Q. Liu, T. Zhang and C. W. Chen, "CrowdDBS: A Crowdsourced Brightness Scaling Optimization for Display Energy Reduction in Mobile Video," *IEEE Trans. Mobile Computing*, Vol. 17, No. 11, pp. 2536-2549, November 2018
 56. J. Liu, G. Zhai, A. Liu, X. Yang, X. Zhao and Chang Wen Chen, "IPAD: Intensity Potential for Adaptive De-Quantization," *IEEE Trans. Image Processing*, Vol. 27, No. 10, pp. 4860-4872, October 2018
 57. F. Lu, Y. Dong and C. W. Chen, "Fully-Parallel Stochastic Decoder for Rate Compatible Modulation," *IEEE Trans. on Circuits and Systems-I*, Vol. 65, No. 10, pp. 3555-3567, October 2018

58. X. Min, K. Gu, G. Zhai, J. Liu, X. Yang and C. W. Chen, "Blind Quality Assessment Based on Pseudo-Reference Image," *IEEE Trans. Multimedia*, Vol. 20, No. 8, pp. 2049-2062, August 2018
59. F. Lu, Y. Dong, W. Rao, C. W. Chen, "Low Complexity Decoding Algorithms for Rate Compatible Modulation," *IEEE Access*, Vol. 6, pp. 31417-31429, June 2018
60. F. Zhao, H. Liu, J. Fan, C. W. Chen, R. Lan and N. Li, "Intuitionistic fuzzy set approach to multi-objective evolutionary clustering with multiple spatial information for image segmentation," *Neurocomputing*, Vol. 312, pp. 296-309, June 2018
61. X. Zhang, D. Xiong, K. Zhao, C. W. Chen and T. Zhang, "Realizing Low-Cost Flash Memory Based Video Caching in Content Delivery Systems," *IEEE Trans. Circuits Syst. Video Technology*, Vol. 28, No. 4, pp. 984-996, April 2018
62. Y. Mao, L. Wu, D.-M. Yan, J. Guo, C. W. Chen and B. Chen, "Generating hybrid interior structure for 3D printing," *Computer Aided Geometric Design*, Vol. 62, pp. 63-72, March 2018
63. L. Wu, C. Yan, M. Jian, S. Liu, W. Dong and C. W. Chen, "A fast hybrid retargeting scheme with seam context and content aware strip partition," *Neurocomputing*, Vol. 286, pp. 198-213, February 2018
64. L. Li, B. Li, H. Li and C. W. Chen, " λ -Domain Optimal Bit Allocation Algorithm for High Efficiency Video Coding," *IEEE Trans. Circuits Syst. Video Technology*, Vol. 28, No. 1, pp. 130-142, January 2018
65. K. Gu, W. Lin, G. Zhai, X. Yang, W. Zhang and C. W. Chen, "No-Reference Quality Metric of Contrast-Distorted Images Based on Information Maximization," *IEEE Trans. Cybernetics*, Vol. 47, No. 12, pp. 4559-4565, December 2017
66. Z. Chen, J. Lin, N. Liao and C. W. Chen, "Full Reference Quality Assessment for Image Retargeting Based on Natural Scene Statistics Modeling and Bi-Directional Saliency Similarity," *IEEE Trans. Image Processing*, Vol. 26, No. 11, pp. 5138-5148, November 2017
67. B. Tan, J. Wu, Y. Li, H. Cui, W. Yu and C. W. Chen, "Analog Coded SoftCast: A Network Slice Design for Multimedia Broadcast/Multicast," *IEEE Trans. Multimedia*, Vol. 19, No. 10, pp. 2293-2306, October 2017
68. B. Tan, H. Cui, J. Wu and C. W. Chen, "An Optimal Resource Allocation for Superposition Coding-Based Hybrid Digital-Analog System," *IEEE Internet of Things Journal* Vol. 4, No. 4, pp. 945-956, August 2017
69. Q. Li, H. Wang, Y. Yan, B. Li and C. W. Chen, "Local Co-Occurrence Selection via Partial Least Squares for Pedestrian Detection," *IEEE Trans. Intelligent Transportation Systems*, Vol. 18, No. 6, pp. 1549-1558, June 2017
70. Z. Liu, B. Liu and C. W. Chen, "Buffer-Aware Resource Allocation Scheme With Energy Efficiency and QoS Effectiveness in Wireless Body Area Networks," *IEEE Access* 5: 20763-20776, May 2017
71. L. Wu, D. Wang, X. Zhang, S. Liu, L. Zhang and C. W. Chen, "MLLDA: Multi-level LDA for modelling users on content curation social networks," *Neurocomputing*, Vol. 236, pp. 73-81, May 2017
72. T. Zhao, Q. Liu and C. W. Chen, "QoE in Video Transmission: A User Experience-Driven Strategy," *IEEE Communications Surveys and Tutorials*, Vol. 19, No. 1, pp. 285-302, March 2017
73. B. Liu, Z. Yan and Chang Wen Chen, "Medium Access Control for Wireless Body Area Networks with QoS Provisioning and Energy Efficient Design," *IEEE Trans. Mob. Computing*, Vol. 16, No. 2, pp. 422-434, February 2017
74. J. Wu, C. Yuen, N.-M. Cheung, J. Chen and C. W. Chen, "Streaming Mobile Cloud Gaming Video over TCP With Adaptive Source-FEC Coding," *IEEE Trans. Circuits Syst. Video Technology*, Vol. 27, No. 1, pp. 32-48, January 2017

75. Z. Yan, J. Xue and C. W. Chen, "Prius: Hybrid Edge Cloud and Client Adaptation for HTTP Adaptive Streaming in Cellular Networks," *IEEE Trans. Circuits Syst. Video Technology*, Vol. 27, No. 1, pp. 209-222 January 2017
76. Z. Qin, J. Yan, K. Ren, C. W. Chen and C. Wang, "SecSIFT: Secure Image SIFT Feature Extraction in Cloud Computing," *ACM Trans. Multimedia Computing, Communications, and Applications*, Vol. 12, No. 4s, Article 65, November 2016
77. G. Wang, W. Xiang, M. Pickering and C. W. Chen, "Light Field Multi-View Video Coding with Two-Directional Parallel Inter-View Prediction," *IEEE Trans. Image Processing*, Vol. 25, No. 11, pp. 5104-5117, November 2016
78. W. Dai, Y. Shen, X. Tang, J. Zou, H. Xiong and C. W. Chen, "Sparse Representation with Spatio-Temporal Online Dictionary Learning for Promising Video Coding," *IEEE Trans. Image Processing*, Vol. 25, No. 10, pp. 4580-4595, October 2016
79. Q. Liu, H. H. Yu and C. W. Chen, "Proactive Interference Avoidance for Mobile-to-Mobile Communication in LTE Networks," *IEEE Trans. Vehicular Technology*, Vol. 65, No. 9, pp. 7064-7077, September 2016
80. J. Wu, C. Yuen, M. Wang, J. Chen and C. W. Chen, "TCP-Oriented Raptor Coding for High-Frame-Rate Video Transmission Over Wireless Networks," *IEEE Journal on Selected Areas in Communications*, Vol. 34, No. 8, pp. 2231-2246, August 2016
81. T. Zhao, Z. Wang and C. W. Chen, "Adaptive Quantization Parameter Cascading in HEVC Hierarchical Coding," *IEEE Trans. Image Processing*, Vol. 25, No. 7, pp. 2997-3009, July 2016
82. D. Miao, J. Fu, Y. Lu, S. Li and C. W. Chen, "A High-Fidelity and Low-Interaction-Delay Screen Sharing System," *ACM Trans. Multimedia Computing, Communications, and Applications*, Vol. 12, No. 3, Article 44, June 2016
83. X. Zhao, H. Lu, C. W. Chen and J. Wu, "Adaptive Hybrid Digital-Analog Video Transmission in Wireless Fading Channel," *IEEE Transactions on Circuits and Systems for Video Technology*, Vol. 26, No. 6, pp. 1117-1130, June 2016
84. H. Cui, C. Luo, C. W. Chen and F. Wu, "Scalable Video Multicast for MU-MIMO Systems with Antenna Heterogeneity," *IEEE Transactions on Circuits and Systems for Video Technology*, Vol. 26, No. 5, pp. 992-1003, May 2016
85. J. Wu, C. Yuen, N.-M. Cheung, J. Chen and C. W. Chen, "Modeling and Optimization of High Frame Rate Video Transmission Over Wireless Networks," *IEEE Trans. Wireless Communications*, Vol. 15, No. 4, pp. 2713-2726, April 2016
86. J. Zhang, Y. Cao, Z.-J. Zha, Z. Zheng, C. W. Chen and Z. Wang, "A Unified Scheme for Super-resolution and Depth Estimation from Asymmetric Stereoscopic Video," *IEEE Transactions on Circuits and Systems for Video Technology*, Vol. 26, No. 3, pp. 479-493, March 2016
87. S. Xiang, L. Yu and C. W. Chen, "No-Reference Depth Assessment Based on Edge Misalignment Errors for T + D Images," *IEEE Trans. Image Processing*, Vol. 25, Vol. 3, pp. 1479-1494, March 2016
88. R. Duan, R. Liu, M. Shirvanimoghaddam, Y. Li and C. W. Chen, "A Low PAPR Constellation Mapping Scheme for Rate Compatible Modulation," *IEEE Communications Letters*, Vol. 20, No. 2, pp. 256-259, February 2016
89. X. Zhu and C. W. Chen, "A Joint Source-Channel Adaptive Scheme for Wireless H.264/AVC Video Authentication," *IEEE Trans. Information Forensics and Security*, Vol. 11, No. 1, pp. 141-153, January 2016
90. J. Wu, C. Yuen, N.-M. Cheung, J. Chen and C. W. Chen, "Enabling Adaptive High-Frame-Rate Video Streaming in Mobile Cloud Gaming Applications," *IEEE Transactions on Circuits and Systems for Video Technology*, Vol. 25, Vol. 12, pp. 1998-2015, December 2015

91. D. Miao, J. Fu, Y. Lu, S. Li and Chang Wen Chen, "Layered Compression for High-Precision Depth Data," *IEEE Trans. Image Processing*, Vol. 24, No. 12, pp. 5492-5504, December 2015
92. Q. Liu and C. W. Chen, "Smart Downlink Scheduling for Multimedia Streaming over LTE Networks with Hard Hand-Off," *IEEE Transaction on Circuits and Systems for Video Technology*, Vol. 25, No. 11, pp. 1815-1829, November 2015
93. K. Gu, G. Zhai, X. Yang, W. Zhang and C. W. Chen, "Automatic contrast enhancement technology with saliency preservation," *IEEE Transactions on Circuits and Systems for Video Technology*, Volume: 25, Issue: 9, pp. 1480-1494, September 2015
94. J. Zhang, H. Li and C. W. Chen, "Distributed Lossless Coding Techniques for Hyperspectral Images," *IEEE Journal of Selected Topics in Signal Processing* Vol. 9, No. 6, pp. 977-989, September 2015
95. T. Zhao, J. Wang, Z. Wang and C. W. Chen, "SSIM-Based Coarse-Grain Scalable Video Coding," *IEEE Transactions on Broadcasting*, Volume: 61, Issue: 2, pp. 210-221, June 2015
96. D. Zhang, H. Li and C. W. Chen, "Robust Transmission of Scalable Video Coding Bitstream Over Heterogeneous Networks," *IEEE Transactions on Circuits and Systems for Video Technology*, Volume: 25, Issue: 2, pp. 300-313, February 2015
97. J. Zou, Q. Wu, H. Xiong and C. W. Chen, "Joint Spectrum and Power Auction with Multiauctioneer and Multibidder in Coded Cooperative Cognitive Radio Networks," *IEEE Trans. Wireless Communications*, Vol. 13, No. 10, pp. 5768-5780 October 2014
98. Y. Cao, S. Zhang, Z.-J. Zha, J. Zhang, C. W. Chen, "A novel segmentation based video-denoising method with noise level estimation," *Information Sciences*, Vol. 281, pp. 507-520, October, 2014
99. Z. Wu and C. W. Chen, "Signal Reconstruction from Partial Frequency Coefficients for Image/Video Frame Upsampling," *IEEE Trans. Broadcasting*, Vol. 60, No. 3, pp. 575-581, September 2014
100. J. Zhang, Y. Cao, Z. Zheng, C. W. Chen and Z. Wang, "A new closed loop method of super-resolution for multi-view images," *Machine Vision and Applications*, Vol. 25, N. 7, pp. 1685-1695, August 2014
101. H. Cui, C. Luo, C. W. Chen and F. Wu, "Robust Linear Video Transmission Over Rayleigh Fading Channel," *IEEE Trans. Communications*, Vol. 62, No. 8, pp. 2790-2801, August 2014
102. S. Fang, X. Xia, H. Xing and C. W. Chen, "Image dehazing using polarization effects of objects and airlight," *Optics Express* Vol. 22, No. 16, DOI:10.1364/OE.22.019523, August 2014
103. J. Xue and C. W. Chen, "Mobile Video Perception: New Insights and Adaptation Strategies," *Journal of Selected Topics in Signal Processing*, Vol. 8, No. 3, pp. 390-401, June 2014
104. Y. Wen, X. Zhu, J. J. P. C. Rodrigues and C. W. Chen, "Cloud Mobile Media: Reflections and Outlook," *IEEE Transactions on Multimedia*, Vol. 16, No. 4, pp. 885-902, June 2014
105. B. Wang, H. Xiong, Z. Ren and C. W. Chen, "Deformable Shape Preserving Video Retargeting With Salient Curve Matching," *IEEE Journal of Emerging and Selected Topics in Circuits and Systems*, Vol. 4, No. 1, pp. 82-94, March 2014
106. W. Yin, T. Mei, C. W. Chen and S. Li, "Socialized mobile photography: Learning to photograph with social context via mobile devices," *IEEE Trans. Multimedia*, Vol. 16, No. 1, pp. 184-200, January 2014
107. W. Dai, H. Xiong, X. Jiang, C. W. Chen, "Structured set intra prediction with discriminative learning in a max-margin Markov network for high efficiency video

- coding,” *IEEE Trans. Circuits and System for Video Technology*, Vol. 23, No. 11, pp. 1941-1956, November 2013
108. H. Cui, C. Luo, J. Wu, C. W. Chen and F. Wu, “Compressive coded modulation for seamless rate adaptation,” *IEEE Transactions on Wireless Communications*, Vol. 12, No. 10, pp. 4892-4904, October 2013
 109. B. Liu, Z. Yan and C. W. Chen, “MAC protocol in wireless body area networks for E-health: challenges and a context-aware design,” *IEEE Wireless Communications*, Vol. 20, No. 4, pp. 64-72, August 2013
 110. Z. Yu, H. Li, Z. Wang, Z. Hu and C. W. Chen, “Multi-level video frame interpolation: exploiting the interaction among different levels. *IEEE Trans. Circuits and System for Video Technology*, Vol. 23, No. 7, pp. 1235-1248, July 2013
 111. H. Xiong, Z. Pan, X. Ye, C. W. Chen, “Sparse spatio-temporal representation with adaptive regularized dictionary learning for low bit-rate video coding,” *IEEE Trans. Circuits and System for Video Technology*, Vol. 23, No. 4, pp. 710-728, April 2013
 112. J. Zou, H. Xiong, D. Wang and C. W. Chen, “Optimal power allocation for hybrid overlay/underlay spectrum sharing in multiband cognitive radio networks,” *IEEE Trans. Vehicular Technology*, Vol. 62, No. 4, pp. 1827-1837, April 2013
 113. S. Liu and C. W. Chen, “A novel 3D video transcoding scheme for adaptive 3D video transmission to heterogeneous terminals,” *ACM Trans. Multimedia Computing, Communication and Applications*, Vol. 8, No. 3s, Article 43, 21 pages, September 2012
 114. X. Zhu and C. W. Chen, “A joint layered scheme for reliable and secure mobile JPEG-2000 streaming,” *ACM Trans. Multimedia Computing, Communication and Applications*, Vol. 8, No. 3, Article 30, 23 pages, July 2012
 115. Z. Wu, H. Yu, B. Tang and C. W. Chen, “Adaptive Initial Quantization Parameter Determination for H.264/AVC Video Transcoding,” *IEEE Trans. Broadcasting*, Vol. 58, No. 2, pp. 277-284, June 2012
 116. C. Li, H. Xiong, J. Zou and C. W. Chen, “Distributed Robust Optimization for Scalable Video Multirate Multicast Over Wireless Networks,” *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 22, No. 6, pp. 943-957, June 2012
 117. L. Wu, P. Xiao, S. Yuan, S. Jiang and C. W. Chen, “A fuzzy vault scheme for ordered biometrics,” *Journal of Communications*, Special Issue on Advances in Comm. and Networking, Vol. 6, No. 9, pp. 682-690, September 2011
 118. Y. Zhang, H. Xiong, Z. He, S. Yu and C. W. Chen, “Reconstruction for distributed video coding: A context-adaptive Markov random field approach,” *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 21, No. 8, pp. 1100-1114, August 2011
 119. H. Xiong, Y. Xu, Y. F. Zheng and C. W. Chen, “Priority belief propagation-based inpainting prediction with tensor voting projected structure in video compression,” *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 21, No. 8, pp. 1115-1129, August 2011
 120. W. Yin, J. Luo and C. W. Chen, “Event-based semantic image adaptation for user-centric mobile display devices,” *IEEE Trans. Multimedia*, Vol. 13, No. 3, pp. 432-442, June 2011
 121. S. Liu, P. Lai, D. Tian and C. W. Chen, “New depth coding techniques with utilization of corresponding video,” *IEEE Trans. Broadcasting*, Vol. 57, No. 2, pp. 551-561, June 2011
 122. Y. Zhang, H. Xiong, Z. He, S. Yu and C. W. Chen, “An Error Resilient Video Coding Scheme Using Embedded Wyner-Ziv Description With Decoder Side Non-Stationary Distortion Modeling,” *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 21, No. 4, pp. 498-512, April 2011

123. C. Li, J. Zou, H. Xiong and C. W. Chen, "Joint coding/routing optimization for distributed video sources in wireless visual sensor networks," *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 21, No. 2, pp. 141-155, February 2011
124. C. Luo, F. Wu, J. Sun and C. W. Chen, "Efficient measurement generation and pervasive sparsity for compressive data gathering," *IEEE Transactions on Wireless Communications* Vol. 9, No. 12, pp. 3728-3738, December 2010
125. Z. Wu, H. Yu and C. W. Chen, "A new hybrid DCT-Wiener-based interpolation scheme for video intra frame up-sampling," *IEEE Signal Processing Letters*, Vol. 17, No. 10, pp. 827-830, October 2010
126. M. Song, D. Tao, C. Chen, X. Li, C. W. Chen, "Color to gray: Visual cue preservation," *IEEE Trans. Pattern Anal. Mach. Intelligence* Vol. 32, No. 9, pp. 1537-1552, September 2010
127. T. Sheng, X. Zhu, G. Hua, H. Guo, J. Zhou and C. W. Chen, "Feedback-free rate-allocation scheme for transform domain Wyner-Ziv video coding," *Journal of Multimedia Systems*, Vol. 16, No. 2, pp. 127-137, 2010
128. W. Pu, C. Luo, F. Wu and C. W. Chen, "QoS-driven network coded wireless multicast," *IEEE Trans. Wireless Communications*, Vol. 8, No. 11, pp. 5662-5669, November 2009
129. W. Yang, J. Zheng, J. Cai, S. Rahardja and C. W. Chen, "Natural and seamless image composition with color control," *IEEE Trans. Image Processing*, Vol. 18, No. 11, pp. 2584-2592, November 2009
130. B. J. Oh and C. W. Chen, "A cross-layer approach to multichannel MAC protocol design for video streaming over wireless ad hoc networks," *IEEE Trans. Multimedia*, Vol. 11, No. 6, pp. 1052-1061, October 2009
131. G. T. Chen, L. Cao, L. Yu and C. W. Chen, "Test-pattern-reduced decoding for turbo product codes with multi-error-correcting eBCH codes," *IEEE Trans. Communications*, Vol. 57, No. 2, pp. 307-310, February 2009
132. D. Song and C. W. Chen, "Maximum-throughput delivery of SVC-based video over MIMO systems with time-varying channel capacity," *Journal of Visual Communication and Image Representation*, Vol. 19, No. 8, pp. 520-528, December 2008
133. C. W. Chen and Y. Wang, "Chain-type long range wireless sensor networks for monitoring long range infrastructures: Architecture and protocols," *International Journal of Distributed Sensor Networks*, Vol. 4, No. 4, pp. 287-314, November 2008
134. W. Guan, J. Cai, J. Zheng, and C. W. Chen, "Segmentation-based view-independent 3D graphics model transmission," *IEEE Trans. Multimedia*, Vol. 10, No. 5, pp. 724-734, August 2008
135. D. Song, L. Cao and C. W. Chen, "A new robust multiple description image coding over wireless networks base on wavelet tree coding, EREC, and error concealment," *Journal of Visual Communication and Image Representation*, Vol. 19, No. 5, pp. 311-319, July 2008
136. D. Gao, J. Cai and C. W. Chen, "Admission control based on rate-variance envelop for VBR traffic over IEEE 802.11e HCCA WLANs," *IEEE Trans. Vehicular Technology*, Vol. 57, No. 3, pp. 1778-1788, May 2008
137. G. Hua and C. W. Chen, "Correlated data gathering in wireless sensor networks based on distributed source coding" *International Journal of Sensor Networks*, Special issue on Energy-Efficient Algorithm and Protocol Design in Sensor Networks, Vol. 4, Nos. 1/2, pp. 13-22, 2008
138. Q. Sun, J. Apostolopoulos, S.-F. Chang and C. W. Chen, "Quality-optimized and secure end-to-end authentication for media stream," Invited Paper in *Proceedings of IEEE special issue on Recent Advances in Distributed Multimedia Communications*, Vol. 96, No. 1, pp. 97-111, January 2008

139. Y. Chen, Y. Hu, O. C. Au, H. Li, and C. W. Chen, "Video error concealment using spatio-temporal boundary matching and partial differential equation," *IEEE Trans. Multimedia*, Vol. 10, No. 1, pp. 2-15, January 2008
140. J. Wu, J. Cai and C. W. Chen, "Single-pass rate-smoothed video encoding with quality constraint," *IEEE Signal Processing Letters*, Vol. 14, No. 10, pp. 715-718, October 2007
141. D. Song and C. W. Chen, "Scalable H.264/AVC video transmission over MIMO wireless systems with adaptive channel selection based on partial channel information," *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 17, No. 9, pp. 1218-1226, September 2007
142. L. Cao, L. Yao and C. W. Chen, "MAP decoding of variable length codes with self-synchronization strings," *IEEE Trans. Signal Processing*, Vol. 55, No. 8, pp. 4325-4330, August 2007
143. Z. Li, Q. Sun, Y. Lian and C. W. Chen, "Joint source-channel-authentication resource allocation and unequal authenticity protection for multimedia over wireless networks," *IEEE Trans. Multimedia*, Vol. 9, No. 4, pp. 837-850, June 2007 (**IEEE ComSoc Multimedia Communications TC 2008 Best Paper Award**)
144. G. T. Chen, L. Cao, L. Yu and C. W. Chen, "An efficient stopping criterion for Turbo product codes," *IEEE Communications Letters*, Vol. 11, No. 6, pp. 525-527, June 2007
145. J. Wu, J. Cai and C. W. Chen, "Rate-distortion analysis of leaky prediction based FGS video for constant quality constrained rate adaptation," *Journal of Visual Communication and Image Representation*, Vol. 18, No. 1, pp. 45-58, February 2007
146. M. Wu and C. W. Chen, "Collaborative image coding and transmission over wireless sensor networks," *EURASIP Journal on Advances in Signal Processing*, Vol. 2007, Article ID 70481, 9 pages, doi:10.1155/2007/70481
147. H. Zheng, C. Ru, L. Yu and C. W. Chen, "Video transmission over MIMO-OFDM system: An MDC and space time coding based approach," *Journal of Advances in Multimedia* special issue on Multimedia Networking, Vol. 2007, Article ID 61491, 8 pages, 2007. doi:10.1155/2007/61491
148. Y. Wang, H. Li and C. W. Chen, "An attention-information-based spatial adaptation framework for browsing videos via mobile devices," *Journal of Applied Signal Processing* special issue on Video Adaptation for Heterogeneous Environments, Vol. 2007, Article ID 25415, 12 pages, doi:10.1155/2007/25415
149. C. W. Chen and Z. He, "Signal processing challenges in next generation multimedia communications," *China Communications Journal*, Vol. 3, No. 5, pp. 20-29, October 2006
150. C. Ru, L. Yin, J. Lu and C. W. Chen, "A new UEP scheme based on adaptive modulation for robust video transmission in MIMO systems," *China Communications Journal*, Vol. 3, No. 5, pp. 102-108, October 2006
151. Y. Wang, X. Fan, H. Li and C. W. Chen, "An attention based spatial adaptation scheme for H.264 videos on mobiles," *International Journal of Pattern Recognition and Artificial Intelligence* special issue on Intelligent Mobile and Embedded Systems, Vol. 20, No. 4, pp. 565-584, June 2006
152. J. Cai, Z. He and C.W. Chen, "A novel frame-level bit allocation based on two-pass video encoding for low bit rate video streaming applications" *Journal of Visual Communication and Image Representation*, Vol. 17, No. 4, pp. 783 – 798, 2006
153. J. Cai and C.W. Chen, "Joint source and channel coding of generalized Gaussian sources with allpass filtering source reshaping," *Journal of Visual Communications and Image Representation*, Vol.16, No.1, pp. 19-37, Feb. 2005.

154. L. Cao and C. W. Chen, "Robust image transmission based on wavelet tree coding, EREC, and error concealment," *Journal of Electronic Imaging*, Vol. 13, No. 3, pp. 646-653, July 2004.
155. L. Cao and C. W. Chen, "Context-based multiple bitstream image transmission over noisy channels," *IEEE Trans. Image Processing*, Vol. 11, No. 11, pp. 1305-1313, November, 2002.
156. A. Vetro, J. Cai and C. W. Chen, "Rate-reduction transcoding design for wireless video streaming," *Journal of Wireless Communications and Mobile Computing*, Vol. 2, No. 6, pp. 625-641, September 2002.
157. L. Cao and C. W. Chen, "Multiple hierarchical image transmission over wireless channels," *Journal of Visual Communications and Image Representation*, Vol. 13, No. 3, pp. 386-399, September 2002.
158. Z. He, J. Cai and C. W. Chen, "Joint source channel rate-distortion analysis for adaptive mode selection and rate control in wireless video coding," *IEEE Trans. Circuits and Systems for Video Technology* special issue in wireless video, Vol. 12, No. 6, pp. 511-523, June 2002.
159. H. Li and C. W. Chen, "Robust image transmission with bi-directional and hierarchical error correction," *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 11, No. 11, pp. 1183-1187, November, 2001
160. J. Cai and C. W. Chen, "Uniform threshold TCQ with block classification for image transmission over noisy channels," *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 11, No. 1, pp. 105-110, January, 2001.
161. J. Cai and C. W. Chen, "Robust joint source-channel coding for image transmission over wireless channels," *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 10, No. 6, pp. 962-966, September, 2000
162. C. W. Chen and Z. Sun, "Image transmission over noisy channels with variable-coefficient fixed length coding scheme," *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 9, No. 8, pp. 680-682, August 1999.
163. C. W. Chen and Z. Sun, "Uniform trellis coded quantization for image transmission over noisy channels," *Signal Processing: Image Communication*, Vol. 14, No. 6-7, pp. 575-584, May 1999.
164. J. Wu, J. Cai and C. W. Chen, "Single-pass rate-smoothed video encoding with quality constraint," Submitted to *IEEE Signal Processing Letters*, Vol. 14, No. 10, pp. 716-718, October 2007
165. Z. He, W. Zeng and C. W. Chen, "Low-pass filtering of rate-distortion functions for quality smoothing and bandwidth control in real-time video coding," *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 15, No. 8, pp. 973-981, August 2005.
166. J. Luo and C. W. Chen, "Modeling of subband coefficients for clustering-based adaptive quantization with spatial constraints," *Journal of Visual Communications and Image Representation*, Vol. 14, No. 3, pp. 205-216, September 2003.
167. Y. Yu, J. Luo and C. W. Chen, "Efficient texture synthesis based on multiresolution block sampling," *Journal of Visual Communications and Image Representation*, Submitted June, 2002.
168. Y. Yu, J. Zhou and C. W. Chen, "A novel fast block motion estimation algorithm based on combined subsamplings on pixels and search candidates," *Journal of Visual Communications and Image Representation*, Vol. 12, No. 1, pp. 96-105, March 2001.
169. Y. Yu, J. Zhou, Y. Wang and C. W. Chen, "A novel two-pass VBR coding algorithm for fixed-size storage applications," *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 11, No. 3, pp. 345-356, March 2001.

170. C. W. Chen and L. Chen, "A cellular neural network architecture for Gibbs random field-based image segmentation," *Journal of Electronic Imaging*, Vol. 7, No. 1, pp. 45-51, January 1998.
171. C. W. Chen, J. Luo, L. Chen and K. J. Parker, "Joint scene and signal modeling for wavelet-based video coding with cellular neural network architecture," *Journal of VLSI Signal Processing*, Vol. 17, No. 3, pp. 201-214, November 1997.
172. J. Luo, C. W. Chen, K. J. Parker and T. S. Huang, "Signal adaptive and scene adaptive quantization for subband image and video compression using wavelet," *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 7, No. 2, pp. 343-357, April 1997.
173. C. W. Chen, L. Chen and J. Luo, "A cellular neural network for clustering-based adaptive quantization in subband video compression," *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 6, No. 6, pp. 688-692, December 1996.
174. J. Luo, C. W. Chen, K. J. Parker and T. S. Huang, "Artifact Reduction in low bit rate DCT-based image compression," *IEEE Trans. Image Processing*, Vol. 5, No. 9, pp. 1363-1368, September 1996.
175. J. Luo, C. W. Chen and K. J. Parker, "Face location in wavelet-based video compression for high perceptual quality videoconferencing," *IEEE Trans. Circuits and Systems for Video Technology*, Vol. 6, No. 4, pp. 411-414, August 1996.
176. J. Luo, C. W. Chen, K. J. Parker, "On the applications of Gibbs random field in image processing: from segmentation to enhancement," *Journal of Electronic Imaging*, Vol. 4, No. 2, pp. 187-198, April 1995.
177. M. Wu, Fraser, and C. W. Chen, "A novel algorithm for computer assisted measurement of cervical length from transvaginal ultrasound images," *IEEE Trans. Information Technology in Biomedicine*, Vol. 8, No. 3, pp. 333-342, September, 2004.
178. L. Fan, J. G. Tamez-Pena and C. W. Chen, "Local force model for cardiac dynamics analysis from volumetric image sequences," *Journal of Computerized Medical Imaging and Graphics*, Vol. 27, No. 6, pp. 437-446, November 2003.
179. C. W. Chen, J. Luo, K. J. Parker and T. S. Huang, "Image segmentation via adaptive K-mean clustering and knowledge-based morphological operations with biomedical application," *IEEE Trans. Image Processing*, Vol. 7, No. 12, pp. 1673-1683, Dec. 1998.
180. J. Luo, C. W. Chen and K. J. Parker, "3D wavelet compression of volumetric medical images with octave zerotree coding," *Journal of Electronic Imaging*, (Invited Paper), Vol. 7, No. 3, pp. 474-485, July 1998.
181. L. Chen, C. W. Chen and K. J. Parker, "Adaptive feature enhancement of mammographic images with wavelet multiresolution analysis," *Journal of Electronic Imaging*, Vol. 6, No. 4, pp. 467-478, October 1997.
182. E. A. Ashton, K. J. Parker, M. J. Berg and C. W. Chen, "A novel volumetric feature extraction technique, with application to MR images," *IEEE Trans. Medical Imaging*, Vol. 16, No. 4, pp. 365-371, August 1997.
183. E. A. Ashton, M. J. Berg, K. J. Parker, J. Weisberg, C. W. Chen and L. Ketonen, "Segmentation and feature extraction techniques, with applications to MRI head studies," *Magnetic Resonance in Medicine*, Vol. 33, pp. 670-677, 1995.
184. C. W. Chen, J. Luo, K. J. Parker and T. S. Huang, "CT volumetric data based left ventricle motion analysis: an integrated approach," *Journal of Computerized Medical Imaging and Graphics*, Vol. 19, pp. 85-100, February 1995.
185. C. W. Chen, T. S. Huang and M. Arrott, "Modeling, analysis and visualization of left ventricle shape and motion by hierarchical decomposition," *IEEE Trans. Pattern Anal. Machine Intell.*, Vol. 16, pp. 342-356, April 1994.
186. C. W. Chen and T. S. Huang, "Nonrigid object motion and deformation estimation from three-dimensional data," *International Journal of Imaging Systems and Technology*, Vol. 2, pp. 385-394, 1990.

187. L. Cao, L. Yao and C. W. Chen, "Joint source and channel decoding with symbol re-alignment," *IEEE Communication Letters*, Vol. 10, No. 10, October 2006
188. L. Cao, C. W. Chen, P. Orlik, D. Gu and J. Zhang, "A trellis-based technique for blind channel estimation and equalization," *Journal of Communications and Networks*, Vol. 6, No.1, pp. 19-25, March 2004.
189. L. Cao and C. W. Chen, "A novel product coding and recurrent alternate decoding scheme for image transmission over noisy channels," *IEEE Trans. Communications*, Vol. 51, No. 9, pp. 1426-1431, September 2003.

Conference Papers

1. B. Huang, Y. Wen, Y. Zhao, Y. Hu, Y. Liu, F. Jia, W. Mao, T. Wang, C. Zhang, C. W. Chen, Z. Chen, and X. Zhang, "SubjectDrive: Scaling Generative Data in Autonomous Driving via Subject Control," *Proceedings of AAAI 2025*: 3617-3625
2. R. Zhu, Y. Pan, Y. Li, T. Yao, Z. Sun, T. Mei, and C. W. Chen, "SD-DiT: Unleashing the Power of Self-Supervised Discrimination in Diffusion Transformer," *Proceedings of CVPR 2024*, pp. 8435-8445
3. Z. Chen, J. Wu, Z. Lei, Z. Zhang, and C. W. Chen, "Expanding Scene Graph Boundaries: Fully Open-Vocabulary Scene Graph Generation via Visual-Concept Alignment and Retention," *Proceedings of ECCV (66) 2024*: 108-124
4. Y. Liu, J. He, W. Li, J. Kim, D. Wei, H. Pfister, and C. W. Chen, "R²-Tuning: Efficient Image-to-Video Transfer Learning for Video Temporal Grounding," *Proceedings of ECCV (41) 2024*: 421-438
5. G. Ding, and C. W. Chen, "Towards Omniscient Feature Alignment for Video Rescaling," *Proceedings of ICASSP 2024*: 4190-4194
6. F. Lan, and C. W. Chen, "Removing Reflective Flare in Real-World Conditions," *Proceedings of ICIP 2024*: 29-33
7. G. Ding, L. Liu, Z. Chen, and C. W. Chen, "Domain-Agnostic Crowd Counting via Uncertainty-Guided Style Diversity Augmentation," *Proceedings of ACM Multimedia 2024*: 1642-1651
8. Y. Jiang, W. Zhang, X. Zhang, X. Wei, C. W. Chen, and Q. Li, "Prior Knowledge Integration via LLM Encoding and Pseudo Event Regulation for Video Moment Retrieval," *Proceedings of ACM Multimedia 2024*: 7249-7258
9. F. Lan, and C. W. Chen, "Understanding and Tackling Scattering and Reflective Flare for Mobile Camera Systems," *Proceedings of ACM Multimedia 2024*: 8768-8776
10. J. Shen, K. Hu, W. Bao, C. W. Chen, and Z. Wang, "Bridging the Gap: Sketch-Aware Interpolation Network for High-Quality Animation Sketch Inbetweening," *Proceedings of ACM Multimedia 2024*: 10287-10295
11. Y. Liu, Z. Ma, Z. Qi, Y. Wu, Y. Shan, and C. W. Chen, "E.T. Bench: Towards Open-Ended Event-Level Video-Language Understanding," *Proceeding of NeurIPS 2024*,
12. Y. Zhang, Y. Pan, T. Yao, R. Huang, T. Mei and C. -W. Chen, "Learning to Generate Language-Supervised and Open-Vocabulary Scene Graph Using Pre-Trained Visual-Semantic Space," *2023 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Vancouver, BC, Canada, 2023, pp. 2915-2924, doi: 10.1109/CVPR52729.2023.00285.
13. T. Lin, Z. Yu, H. Hu, Y. Xu and C. W. Chen, "Interventional Bag Multi-Instance Learning On Whole-Slide Pathological Images," *2023 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Vancouver, BC, Canada, 2023, pp. 19830-19839, doi: 10.1109/CVPR52729.2023.01899. (**CVPR Highlight Paper**)
14. J. Lin et al., "Being Comes from Not-Being: Open-Vocabulary Text-to-Motion Generation with Wordless Training," *2023 IEEE/CVF Conference on Computer Vision*

- and Pattern Recognition (CVPR), Vancouver, BC, Canada, 2023, pp. 23222-23231, doi: 10.1109/CVPR52729.2023.02224. **(CVPR Highlight Paper)**
15. B. X. B. Yu, Z. Zhang, Y. Liu, S. -H. Zhong, Y. Liu and C. W. Chen, "GLA-GCN: Global-local Adaptive Graph Convolutional Network for 3D Human Pose Estimation from Monocular Video," 2023 IEEE/CVF International Conference on Computer Vision (ICCV), Paris, France, 2023, pp. 8784-8795, doi: 10.1109/ICCV51070.2023.00810.
 16. Ruixiang Jiang, Lingbo Liu, and Changwen Chen. 2023. CLIP-Count: Towards Text-Guided Zero-Shot Object Counting. In Proceedings of the 31st ACM International Conference on Multimedia (MM '23). Association for Computing Machinery, New York, NY, USA, 4535–4545. <https://doi.org/10.1145/3581783.3611789>
 17. Tao Yang, Fan Wang, Junfan Lin, Zhongang Qi, Yang Wu, Jing Xu, Ying Shan, and Changwen Chen. 2023. Toward Human Perception-Centric Video Thumbnail Generation. In Proceedings of the 31st ACM International Conference on Multimedia (MM '23). Association for Computing Machinery, New York, NY, USA, 6653–6664. <https://doi.org/10.1145/3581783.3612434>
 18. Y. Liu, S. Li, Y. Wu, C.-W. Chen, Y. Shan and X Qie , “UMT: Unified Multi-Modal Transformers for Joint Video Moment Retrieval and Highlight Detection,” Proceeding of CVPR2022.
 19. Y. Zhang, Y. Pan, T. Yao, R. Huang, T. Mei and C.-W. Chen , “Exploring Structure-Aware Transformer Over Interaction Proposals for Human-Object Interaction Detection,” Proceeding of CVPR2022.
 20. Z. Chen, J. Wu, Z. Lei, Z. Zhang and C. W. Chen, “The Lame Can’t Go Far: Visual Stream Limits The Video Question Answering,” ECCV2022 Workshop
 21. R. Zhu, B. Zhao, J. Liu, Z. Sun and C. W. Chen , “Improving Contrastive Learning by Visualizing Feature Transformation,” Proc. Of ICCV 2021: 10286-10295
 22. Y. Liu, J. Yuan and C. W. Chen, “ConsNet: Learning Consistency Graph for Zero-Shot Human-Object Interaction Detection,” Proc. ACM Multimedia 2020, October 2020
 23. J. Yu, H. Xie, M. Li, G. Xie, Y. Yu and C. W. Chen, “Mobile Centernet for Embedded Deep Learning Object Detection, Proc. IEEE ICME 2020 Workshops, pp. 1-6, July 2020
 24. J. Yu, C. W. Chen and Z. Wang, “3D Singing Head for Music VR: Learning External and Internal Articulatory Synchronicity from Lyric, Audio and Notes,” Proc. ACM Multimedia 2019, pp. 945-952, October 2019
 25. H. Xue, T. Zhao, W. Chen, Q. Liu, S. Zheng and C. W. Chen, “Visual Attention and Haptic Control: A Cross-Study,” Proc. BigMM 2019, pp. 111-117, September 2019
 26. T. Wei, C. Wang and C. W. Chen, “Stable Network Morphism,” Proc. of International Joint Conference on Neural Networks 2019, July 2019
 27. X. Jiang, H. Lu, C. W. Chen and F. Wu, “Receiver-driven Video Multicast over NOMA Systems in Heterogeneous Environments,” Proc. of IEEE INFOCOM 2019, pp. 982-990, April-May, 2019
 28. J. Zhang, Y. Cao, Y. Wang, C. Wen and C. W. Chen, “Fully Point-wise Convolutional Neural Network for Modeling Statistical Regularities in Natural Images,” Proc. of ACM Multimedia 2018, pp. 984-992, October 2018
 29. S. Ma, J. Fu, C. W. Chen and T. Mei, “DA-GAN: Instance-Level Image Translation by Deep Attention Generative Adversarial Networks,” Proc. of IEEE CVPR 2018, pp. 5657-5666, July 2018
 30. Y. Yu, Q. Jin and C. W. Chen, “FF-CMnet: A CNN-Based Model for Fine-Grained Classification of Car Models Based on Feature Fusion,” Proc. of ICME 2018, pp. 1-6, July 2018

31. X. Jiang, H. Lu and C. W. Chen, "Enabling Quality-Driven Scalable Video Transmission over Multi-User NOMA System," Proc. of IEEE INFOCOM 2018, pp. 1952-1960, April 2018
32. R. Dasari and C. W. Chen, "MPEG CDVS Feature Trajectories for Action Recognition in Videos," Proc. of IEEE MIPR 2018, pp. 301-304, April 2018
33. C. Ma, Z. Yan and C. W. Chen, "LARM: A Lifetime Aware Regression Model for Predicting YouTube Video Popularity," Proc. ACM CIKM 2017, pp. 467-476, November 2017
34. Z. Yan and C. W. Chen, "Too Many Pixels to Perceive: Subpixel Shutoff for Display Energy Reduction on OLED Smartphones," Proc. of ACM Multimedia 2017, pp. 717-725, October 2017
35. S. Ma, J. Liu and C. W. Chen, "A-Lamp: Adaptive Layout-Aware Multi-patch Deep Convolutional Neural Network for Photo Aesthetic Assessment," Proc. IEEE CVPR 2017, pp. 722-731, July 2017
36. J. Zhang, Y. Cao, S. Fang, Y. Kang and C. W. Chen, "Fast Haze Removal for Nighttime Image Using Maximum Reflectance Prior," Proc. IEEE CVPR 2017, pp. 7016-7024, July 2017
37. B. Liu, H. Luo and C. W. Chen, "A Novel Authentication Scheme Based on Acceleration Data in WBAN," Proc. of CHASE 2017, pp. 120-126, July 2017
38. J. Yu and C. W. Chen, "From talking head to singing head: A significant enhancement for more natural human computer interaction," Proc. of IEEE ICME 2017, pp. 511-516, July 2017
39. J. Liu, G. Zhai, X. Yang, M. Hu and C. W. Chen, "IPAD: Intensity potential for adaptive de-quantization," Proc. of IEEE ICME 2017, pp. 1207-1212, July 2017
40. H. Jiang, B. Liu and C. W. Chen, "Performance analysis for ZigBee under WiFi interference in smart home," Proc. of IEEE ICC 2017, pp. 1-6, May 2017
41. C. Shen, Z. Yu, C. W. Chen and F. Wu, "On the effective capacities of distributed and co-located large-scale antenna systems," Proc. of IEEE ICC 2017, pp. 1-6, May 2017
42. Y. Liu, J. Fu, T. Mei and C. W. Chen, "Let Your Photos Talk: Generating Narrative Paragraph for Photo Stream via Bidirectional Attention Recurrent Neural Networks," Proc. of AAAI 2017, pp. 1445-1452, February 2017
43. T. Vu, H. Tran, K. W. Cho, C. Song, F. Lin, C. W. Chen, M. Hartley-McAndrew, K. R. Doody and Wenyao Xu, "Effective and efficient visual stimuli design for quantitative autism screening: An exploratory study, Proc. BHI 2017, pp. 297-300, February 2017
44. S. Chen, B. Liu and C. W. Chen, "A Structural Coupled-Layer Tracking Method Based on Correlation Filters, Proc. of 2017 MultiMedia Modeling Conference, pp. 65-76, January 2017
45. Z. Yan and C. W. Chen, "RnB: rate and brightness adaptation for rate-distortion-energy tradeoff in HTTP adaptive streaming over mobile devices," *Proc. ACM MobiCom2016*, pp. 308-319, New York, NY, October 2016
46. Z. Liu, B. Liu and C. W. Chen, "Buffer-aware and QoS-effective resource allocation scheme in WBANs," *Proc. IEEE HealthCom 2016*, pp. 1-6, Munich, Germany, September 2016
47. S. Ma and C. W. Chen, "Automatic creation of magazine-page-like social media visual summary for mobile browsing," *Proc. IEEE ICIP 2016*, pp. 469-473, Phoenix, AZ, September 2016
48. C. Ma, Z. Yan and C. W. Chen, "Forecasting initial popularity of just-uploaded user-generated videos," *Proc. IEEE ICIP 2016*, pp. 474-478, Phoenix, AZ, September 2016
49. Q. Liu, Z. Yan and Chang Wen Chen, "Cloud-based video streaming with systematic mobile display energy saving: Rate-distortion-display energy profiling," *Proc. IEEE ICIP 2016*, pp. 1504-1508, Phoenix, AZ, September 2016

50. J. Hu and C. W. Chen, "Bayesian based view synthesis for multi-planar structures," *Proc. IEEE ICIP 2016*, pp. 4032-4036, Phoenix, AZ, September 2016
51. L. Wu, D. Zhang, X. Zhang, Y. Jing, H. Liu and C. W. Chen, "Recommending Followees Based on Content Weighted User Interest Homophily," *Proc. ACM ICIMCS 2016*, pp. 146-151, Xi'an, China, August 2016
52. Y. Liu, T. Mei and C. W. Chen, "Automatic suggestion of presentation image for storytelling," *Proc. IEEE ICME 2016*, pp. 1-6, Seattle, WA, July 2016
53. C. Ma, Z. Yan and C. W. Chen, "Attribute-based multi-dimension scalable access control for social media sharing," *Proc. IEEE ICME 2016*, pp. 1-6, Seattle, WA, July 2016
54. T. Wei, C. W. Chen and C. Wang, "Barycentric coordinates based soft assignment for object classification," *Proc. IEEE ICME Workshops 2016*, pp. 1-6, Seattle, WA, July 2016
55. T. Wei, C. Wang, Y. Rui and C. W. Chen, "Network Morphism," *Proc. ICML 2016*, pp. 564-572, New York, NY, June 2016
56. Z. Liu, B. Liu, C. Chen and C. W. Chen, "An energy-efficient and QoS-effective resource allocation scheme in WBANs," *Proc. IEEE EMBS 13th Annual International Body Sensor Networks Conference*, pp. 341-346, San Francisco, CA, June 2016
57. Q. Guo, B. Liu and C. W. Chen, "A two-layer and multi-strategy framework for human activity recognition using smartphone," *Proc. IEEE ICC 2016*, pp.1-6, Kuala Lumpur, Malaysia, May 2016
58. J. Sun, R. Liu, Y. Wang and C. W. Chen, "Irregular Repetition Slotted ALOHA with Priority (P-IRSA)," *Proc. IEEE VTC Spring 2016*, pp. 1-5, Nanjing, China, May 2016
59. J. Liu, X. Yang, G. Zhai and C. W. Chen, "Visual saliency model based on minimum description length," *Proc. IEEE ISCAS 2016*, pp. 990-993, Montreal, Canada, May 2016
60. L. Wu, D. Wang, C. Guo, J. Zhang and C. W. Chen, "User Profiling by Combining Topic Modeling and Pointwise Mutual Information (TM-PMI)," *Proceedings of MMM 2016*, pp. 152-161, Miami, FL, January 2016
61. Z. Liu, B. Liu, C. Chen and C. W. Chen, "Energy-Efficient Resource Allocation with QoS Support in Wireless Body Area Networks," *Proceedings of GLOBECOM 2015*, San Diego, CA, December 2015
62. X. Zhao, B. Liu, C. Chen and C. W. Chen, "QoS-Driven Power Control for Inter-WBAN Interference Mitigation," *Proceedings of GLOBECOM 2015*, San Diego, CA, December 2015
63. T. Zhao, Z. Wang, S. Kwong and C. W. Chen, "On SSIM-bit rate comparison of HEVC encoders," *Proceedings of APSIPA 2015*, pp. 246-251, Hong Kong, December 2015
64. Z. Yan, Q. Liu, T. Zhang and C. W. Chen, "Exploring QoE for Power Efficiency: A Field Study on Mobile Videos with LCD Displays," *Proceedings of the 23rd ACM International Conf. on Multimedia (ACM MM2015)*, Brisbane, Australia, October 2015
65. W. Cheng, R. Jiang and C. W. Chen, "Color Photo Makeover via Crowd Sourcing and Recoloring" *Proceedings of the 23rd ACM International Conf. on Multimedia (ACM MM2015)*, Brisbane, Australia, October 2015
66. Z. Yan, C. Westphal, X. Wang and C. W. Chen, "Service provisioning and profit maximization in network-assisted adaptive HTTP streaming," *Proceedings of ICIP 2015*, pp. 2786-2790, Quebec City, Canada, September 2015
67. K. Liu, B. Liu, C. Chen and C. W. Chen, "A hierarchical anti-occlusion tracking algorithm based on DMPF and ORB," *Proceedings of ICIP 2015*, pp. 2979-2983, Quebec City, Canada, September 2015

68. J. Hu, D. Q. Zhang, H. Yu and C. W. Chen, "Multi-objective content preserving warping for image stitching," *Proc. IEEE International Conf. Multimedia and Expo, ICME 2015*, Turin, Italy, July 2015
69. J. Hu, D. Q. Zhang, H. Yu and C. W. Chen, "Discontinuous seam cutting for enhanced video stitching," *Proc. IEEE International Conf. Multimedia and Expo, ICME 2015*, Turin, Italy, July 2015
70. J. Liu, G. Zhai, X. Yang and C. W. Chen, "Image inpainting with adaptive linear predictor," *Proc. IEEE International Conf. Multimedia and Expo, ICME 2015*, Turin, Italy, July 2015
71. L. Wu, L. Wang, S. Liu, Q. Zheng, Y. Jing, C. W. Chen and B. Yan, "Image retargeting by combining fast seam carving with neighboring probability and scaling," *Proc. IEEE International Conf. Multimedia and Expo, ICME 2015*, Turin, Italy, July 2015
72. Z. Qin, J. Yan, K. Ren, C. W. Chen and C. Wang, "Private Image Computation: the Case of outsourced Privacy-preserving SIFT," *Proceedings of the 22st ACM International Conf. on Multimedia (ACM MM2014)*, Orlando, FL, November 2014
73. Z. Yan, C. W. Chen and B. Liu, "Admission Control for Wireless Adaptive HTTP Streaming: An Evidence Theory Based Approach," *Proceedings of the 22st ACM International Conf. on Multimedia (ACM MM2014)*, Orlando, FL, November 2014
74. S. Ma, Y. Fan and C. W. Chen, "Pose Maker: A Pose Recommendation System for Person in the Landscape Photographing," *Proceedings of the 22st ACM International Conf. on Multimedia (ACM MM2014)*, Orlando, FL, November 2014
75. J. Hu, D.-Q. Zhang, H. H. Yu and C. W. Chen, "Long scene panorama generation for indoor environment," *Proc. ICIP2014*, pp. 4632-4636, October 2014
76. S. Ma, Y. Fan, C. W. Chen, "Finding Your Spot: A Photography Suggestion System for Placing Human in the Scene," *Proc. ICIP2014*, pp. 556-560, October 2014
77. P. Chanawangsa, J. Wan, C. Wu and C. W. Chen, "A novel 2D-3D hybrid approach to vehicle trajectory and speed estimation," *Proc. 2014 IEEE 17th International Conf. on Intelligent Transportation Systems (ITSC2014)*, Pages 1906 – 1907, October 2014
78. J. Hu, D.-Q. Zhang, H. H. Yu and C. W. Chen, "High Resolution Free-view Interpolation of Planar Structure," *Proc. IEEE International Conf. Multimedia and Expo, ICME 2014*, Chengdu, China, July 2014
79. C. Ma and C. W. Chen, "Secure media sharing in the cloud: Two-dimensional-scalable access control and comprehensive key management," *Proc. IEEE International Conf. Multimedia and Expo, ICME 2014*, Chengdu, China, July 2014
80. Z. Yan, J. Xue and C. W. Chen, "QoE continuum driven HTTP adaptive streaming over multi-client wireless networks," *Proc. IEEE International Conf. Multimedia and Expo, ICME 2014*, Chengdu, China, July 2014
81. S. Xiang, L. Yu and C. W. Chen, "No-reference depth quality assessment for texture-plus depth images," *Proc. IEEE International Conf. Multimedia and Expo, ICME 2014*, Chengdu, China, July 2014
82. J. Xue, D.-Q. Zhang, H. H. Yu and C. W. Chen, "Assessing quality of experience for adaptive HTTP video streaming," *Proc. IEEE ICME2014 Workshop on Emerging Multimedia Systems and Applications*, Chengdu, China, July 2014
83. D. Miao, J. Fu, Y. Lu, S. Li and C. W. Chen, "High frame rate screen video coding for screen sharing applications," *Proc. ISCAS 2014*, pp. 2157-2160, Melbourne, Australia, June 2014
84. H. Hu, J. Huang, H. Zhao, Y. Wen, C. W. Chen and T.-S. Chua, "Social TV analytics: a novel paradigm to transform TV watching experience," *Proc. MMSys 2014*, pp. 172-175, Singapore, April 2014

85. H. Cui, C. Luo, C. W. Chen and F. Wu, "Robust uncoded video transmission over wireless fast fading channel," *Proc. of INFOCOM 2014*, pp. 73-81, Toronto, Canada, April 2014
86. C. Wang, B. Zhang, K. Ren, J. M. W. Roveda and C. W. Chen and Z. Xu, "A privacy-aware cloud-assisted healthcare monitoring system via compressive sensing," *Proc. INFOCOM 2014*, pp. 2130-2138, Toronto, Canada, April 2014
87. P. Chanawangsa and C. W. Chen, "A novel video analysis approach for overtaking vehicle detection," *Proc. IEEE International Conference on Connected Vehicles and Expo*, Las Vegas, NV, December 2013
88. W. Yin, T. Mei and C. W. Chen, "Automatic generation of social media snippets for mobile browsing," *Proceedings of the 21st ACM international conference on Multimedia (ACM MM2013)*, pp. 927-936, Barcelona, Spain, October 2013
89. H. Feng, B. Liu, Z. Yan, C. Zhang, C. W. Chen, "Prediction-based dynamic relay transmission scheme for Wireless Body Area Networks," *Proc. of PIMRC 2013*, pp. 2539-2544, London, UK, September 2013
90. D. Miao, W. Zhu and C. W. Chen, "low-delay cloud based rendering of free viewpoint video for mobile devices," *Proceedings of SPIE Conference on Cloud-based Image Processing*, SPIE Vol. 8856, doi:10.1117/12.2023177.
91. L. He, B. Liu, Y. Yao, N. Yu, C. W. Chen, "MOS-based channel allocation schemes for mixed services over cognitive radio networks," *Proc. International Conference on Image and Graphics*, pp. 832-837, Qingdao, China, July 2013
92. D. Miao, J. Fu, Y. Lu, S. Li and C. W. Chen, "Layered screen video coding leveraging hardware video codec," *IEEE International Conf. Multimedia and Expo, ICME 2013*, San Jose, CA, July 2013
93. Z. Xu, X.-J. Wang and C. W. Chen, "Mining Visualness," *IEEE International Conf. Multimedia and Expo, ICME 2013*, San Jose, CA, July 2013 (**Best Student Paper Award**)
94. Q. Liu and C. W. Chen, "Enhancing multimedia QoS with device-to-device communication as an underlay in LTE networks," *IEEE International Conf. Multimedia and Expo, ICME 2013*, San Jose, CA, July 2013
95. L. Wu, L. Cao, C. W. Chen, "Fast and improved seam carving with strip partition and neighboring probability constraints," *Proc. of 2013 International Symposium on Circuits and System, ISCAS 2013*, pp. 2812-2815, Beijing China, May 2013
96. P. Chanawangsa and C. W. Chen, "A new color-based lane detection via Gaussian radial basis function networks," *Proc. IEEE International Conference on Connected Vehicles and Expo*, Beijing, China, December 2012
97. W. Yin, T. Mei and C. W. Chen, "Assessing photo quality with geo-context and crowdsourced photos," *Proc. IEEE Visual Communication and Image Processing, VCIP 2012*, San Diego, CA, Nov 2012 (**Best Student Paper Award**)
98. D. Miao, J. Fu, Y. Lu, S. Li and C. W. Chen, "Layered compression for high dynamic range depth," *Proc. IEEE Visual Communication and Image Processing, VCIP 2012*, San Diego, CA, Nov 2012
99. Z. Yan, B. Liu and C. W. Chen, "QoS-driven scheduling approach using optimal slot allocation for wireless body area networks", in *Proc. 15th International Conference on e-Health Networking, Application & Services (HealthCom 2012)*, Beijing, China, pp. 267-272, Oct 2012 (**Best Student Paper Finalist**)
100. Q. Liu, Z. Zou and C. W. Chen, "QoS-driven and fair downlink scheduling for video streaming over LTE networks with deadline and hard hand-off," *Proc. ICME 2012*, pp. 188-193, Melbourne, Australia, July 2012 (**Best Paper Award Runner-up**)

101. S. Liu, P. A. Chou, C. Zhang, Z. Zhang and C. W. Chen, "Virtual view reconstruction using temporal information," *Proc. ICME 2012*, pp. 115-120, Melbourne, Australia, July 2012
102. W. Yin, T. Mei and C. W. Chen, "Crowdsourced learning to photograph via mobile devices," *Proc. ICME 2012*, pp. 812-817, Melbourne, Australia, July 2012
103. Y. Zhang, H. Xiong and C. W. Chen, "A Novel Slepian-Wolf Decoding Algorithm Exploiting Geometric Regularity Constraints with Anisotropic MRF Modeling," *Proc. of International Symposium on Circuits and Systems*, Seoul, Korea, May 2012
104. D. Miao, J. Fu, Y. Lu, S. Li and C. W. Chen, "Texture-Assisted Kinect Depth Inpainting," *Proc. of International Symposium on Circuits and Systems*, Seoul, Korea, May 2012
105. W. Pu, Z. Zou and C. W. Chen, "video adaptation proxy for wireless dynamic adaptive streaming over HTTP," *Proceedings of Packet Video Workshop 2012*, pp. 65-70, Munich, Germany, May 2012
106. H. Chen, H. Cui and C. W. Chen, "mobile video transmission via Wyner-Ziv video coding and rate compatible modulation," *Proceedings of Packet Video Workshop 2012*, pp. 53-58, Munich, Germany, May 2012
107. J. Xue and C. W. Chen, "Mobile JND: Environment adapted perceptual model and mobile video quality enhancement," *Proceedings of 3rd ACM Multimedia Systems Conference*, pp. 173-183, Chapel Hill, NC, Feb 2012
108. P. Chanawangsa and C. W. Chen, "A new smartphone lane detection system: realizing true potential of multi-core mobile devices," *Proceeding of 4th ACM Workshop on Mobile Video*, pp. 19-24, Chapel Hill, NC, Feb 2012
109. D. Miao, W. Zhu, C. Luo and C. W. Chen, "Resource allocation for cloud-based free viewpoint video rendering for mobile phones," *Proc. ACM Multimedia 2011*, pp. 1237-1240, November 2011
110. W. Pu, Z. Zou and C. W. Chen, "Dynamic adaptive streaming over HTTP from multiple content distribution servers," *Proc. GLOBECOM 2011*, Houston, TX, Nov 2011
111. H. Lu and C. W. Chen, "Packet loss analysis for media streaming with network coding in wireless broadcast networks," *Proc. GLOBECOM 2011*, Houston, TX, Nov 2011
112. Z. Feng, G. Wen, Z. Zou and C. W. Chen, "Wireless video streaming QoS guarantees based on virtual leaky bucket," *Proc. GLOBECOM 2011*, Houston, TX, Nov 2011
113. H. Cui, C. Luo, C. W. Chen and F. Wu, "MixCast modulation for layered video multicast over WLANs," *Proc. IEEE VCIP 2011*, Tainan, Taiwan, November 2011
114. W. Zhang, Q. Liu, H. Li and C. W. Chen, "Wyner-Ziv video coding using progressive encoding and decoding," *Proc. IEEE VCIP 2011*, Tainan, Taiwan, November 2011
115. Y. Zhang, H. Xiong, H. Wang and C. W. Chen, "Conditional random field based side-information fusion for distributed multi-view video coding," *Proc. IEEE VCIP 2011*, Tainan, Taiwan, November 2011
116. H. Cui, C. Luo, K. Tan, F. Wu and C. W. Chen, "Seamless rate adaptation for wireless networking," *Proc. MSWiM 2011*, pp. 437-446, Miami, FL, Oct-Nov 2011 (**Best Paper Award Finalist**)
117. H. Chen, E. G. Steinbach and C. W. Chen, "A comparison of the error resiliency of bit-plane based and symbol based pixel-domain distributed video coding," *Proc. ICIP 2011*, pp. 1809-1812, Brussels, Belgium, Sept 2011
118. W. Pu, Z. Zou and C. W. Chen, "New TCP video streaming proxy design for last-hop wireless networks," *Proc. ICIP 2011*, pp. 2225-2228, Brussels, Belgium, Sept 2011

119. X. Zhu and C. W. Chen, "A collusion resilient key management scheme for multi-dimensional scalable media access control," *Proc. ICIP 2011*, pp. 2769-2772, Brussels, Belgium, Sept 2011
120. Q. Liu and C. W. Chen, "Fairness and QOS guaranteed user scheduling for multi-user MIMO broadcasting channel," *Proc. ICIP 2011*, pp. 945-948, Brussels, Belgium, Sept 2011
121. X. Zhu and C. W. Chen, "Towards maximal decodable rate for multi-rate multicast of digital media with network coding," *Proc. ICME 2011*, Barcelona, Spain, July 2011 **(Best Paper Award Finalist)**
122. J. Xue and C. W. Chen, "Towards viewing quality optimized video adaptation," *Proc. ICME 2011*, Barcelona, Spain, July 2011
123. B. Liu, Z. Yan and C. W. Chen, "CA-MAC: A Hybrid Context-aware MAC Protocol for Wireless Body Area Networks", in *Proc. 14th International Conference on e-Health Networking, Application & Services (HealthCom 2011)*, Columbia, Missouri, USA, pp. 213-216, June 2011
124. H. Lu and Chang Wen Chen, "Playback interruption probability analysis for Roadside-to-Vehicle media streaming," *Proc. WOWMOM 2011*, Lucca, Italy, June 2011
125. S. Liu and C. W. Chen, "Scalable video transmission: packet loss induced distortion modeling and estimation," *Proc. NOSSDAV 2011*, pp. 111-116, Vancouver, Canada, June 2011
126. Q. Liu, Z. Zou and C. W. Chen, "A deadline-aware virtual contention free EDCA scheme for H.264 video over IEEE 802.11e wireless networks," *Proc. ISCAS 2011*, pp. 625-628, Rio de Janeiro, Brazil, May 2011 **(Best Student Paper Award Finalist)**
127. H. Chen, E. G. Steinbach and C. W. Chen, "Joint source-channel rate control for pixel-domain distributed video coding," *Proc. ICASSP 2011*, pp. 1533-1536, Prague, Czech Republic, May 2011
128. W. Yin, X. Zhu and C. W. Chen, "Contemporary ubiquitous media services: Content recommendation and adaptation," *Proc. PerCom Workshops 2011*, pp. 129-134, Seattle, WA, March 2011
129. Q. Liu and C. W. Chen, "Blind Channel Equalization for Fast Moving Terminals in Prioritized Spatial Multiplexing MIMO Systems," *Proc. of Globecom 2010*, pp. 1-5, Miami, FL, December 2010
130. Q. Liu, D. Balla and C. W. Chen, "A new channel simulation model for fast moving terminals," *Proc. 15th IEEE International Workshop on Computer Aided Modeling, Analysis and Design of Communication Links and Networks (CAMAD)*, pp. 52-56, Miami, FL December 2010
131. S. Liu and C. W. Chen, "3D video transcoding for virtual views," *Proc. ACM Multimedia 2010*, pp. 795-798, Florence, Italy, October 2010
132. M. Liu, Y. Guo, H. Li and C. W. Chen, "Low-complexity rate control based on rho-domain model for scalable video coding," *Proc. ICIP 2010*, pp. 1277-1280, Hong Kong, September 2010
133. S. Liu, P. Lai, D. Tian, C. Gomila and C. W. Chen, "Sparse dyadic mode for depth map compression," *Proc. ICIP 2010*, pp. 3421-3424, Hong Kong, September 2010
134. X. Zhu, C. W. Chen, "A joint source-channel adaptive scheme for wireless H.264 video authentication," *Proc. ICME 2010*, pp. 13-18, Singapore, July 2010
135. W. Yin, J. Luo and C. W. Chen, "User guided semantic image adaptation for mobile display devices," *Proc. ICME 2010*, pp. 418-423, Singapore, July 2010
136. Q. Liu, S. Liu and C. W. Chen, "A novel prioritized spatial multiplexing for MIMO wireless system with application to H.264 SVC video," *Proc. ICME 2010*, pp. 968-973, Singapore, July 2010

137. W. Pu, H. Cui, C. Luo, F. Wu and C. W. Chen, "Stable maximum throughput broadcast in wireless fading channels," *Proc. INFOCOM 2010*, pp. 2534-2542, San Diego, CA, March 2010
138. C. Luo, F. Wu, C. W. Chen, J. Sun, "Compressive data gathering for large-scale wireless sensor networks," *MobiCom 2009, Annual International Conference on Mobile Computing and Networking*, September 2009, Beijing, China (**2016 Test of Time Award in Computer Networking by Shanghai Computer Society**)
139. J. Zhang, H. Li and C. W. Chen, "Progressive Distributed Coding of Multispectral Images" *Proc. of 5th International Mobile Multimedia Communication Conference*, September 2009, London, UK (**Best Student Paper Award**)
140. H. Lu, F. Wu and C. W. Chen, "Stateful scheduling with network coding for roadside-to-vehicle communication," *Proc. IEEE International Conference on Communications (ICC)*, June 2009, Dresden, Germany
141. X. Zhu, Z. Zhang and C. W. Chen, "A joint layered coding scheme for unified reliable and secure media transmission with implementation on JPEG 2000 images," *Proc. 2009 International Conf. Multimedia and Expo*, June 2009 (**Best Student Paper Award Finalist**)
142. J. Zhang, H. Li, and C. W. Chen, "Distributed coding techniques for onboard lossless compression of multispectral images" *Proc. 2009 International Conf. Multimedia and Expo*, June 2009
143. B. J. Oh and C. W. Chen, "A cross-layer oriented multi-channel MAC protocol design for QoS-centric video streaming over wireless Ad Hoc networks" *Proc. 2009 International Conf. Multimedia and Expo*, June 2009
144. Q. Liu, H. Li, Y. Song and C. W. Chen, "Distributed multiview video coding using the fusion of triple side information" *Proc. 2009 International Conf. Multimedia and Expo*, June 2009
145. B. J. Oh and C. W. Chen, "An opportunistic multi rate MAC for reliable H.264/AVC video streaming over wireless mesh networks," *Proc. 2009 International Symposium on Circuits and Systems*, May 2009
146. G. Hua and C. W. Chen, "New insights into improving compression efficiency for distributed video coding," *Proc. 2009 International Packet Video Workshop*, May 2009
147. S. Liu and C. W. Chen, "Multiview video transcoding: From multiple views to single view," *Proc. 2009 Picture Coding Symposium*, May 2009
148. C. Luo, W. Pu, C. W. Chen, J. Sun and F. Wu, "Forepressure transmission control for wireless video sensor networks," *Proc. of IEEE SECON 2009*, pp. 1-9, January 2009
149. T. Sheng, J. Zhou, H. Guo and C. W. Chen, "Rate allocation for transform domain Wyner-Ziv video coding without feedback," *Proc. 2008 ACM International Conference on Multimedia*, October 2008
150. J. Zhang, H. Li and C. W. Chen, "Distributed image coding based on integrated Markov random field modeling and LDPC decoding," *Proc. 2008 IEEE Multimedia Signal Processing Workshop*, October 2008
151. Y. Guo, H. Li, Y-K. Wang, C. W. Chen, "Error resilient transcoding of scalable video bitstreams," *Proc. 2008 IEEE Multimedia Signal Processing Workshop*, October 2008
152. X. Zhu, Q. Sun, Z. Zhang, C. W. Chen, "A joint ECC based media error and authentication protection scheme," *Proc. 2008 IEEE International Conference on Multimedia and Expo*, June 2008
153. G. Hua and C. W. Chen, "Distributed video coding with zero motion skip and efficient DCT coefficient encoding," *Proc. 2008 IEEE International Conference on Multimedia and Expo*, June 2008

154. B. J. Oh and C. W. Chen, "Energy efficient H.264 video transmission over wireless Ad Hoc networks based on adaptive 802.11e EDCA MAC protocols," *Proc. 2008 IEEE International Conference on Multimedia and Expo*, June 2008
155. J. Zhang, H. Li, and C. W. Chen, "Distributed image coding based on integrated Markov modeling and LDPC decoding," *Proc. 2008 IEEE International Conference on Multimedia and Expo*, June 2008
156. B. J. Oh and C. W. Chen, "Performance evaluation of H.264 video over ad hoc networks based on dual mode IEEE 802.11B/G and EDCA MAC architecture," *Proc. IEEE International Symposium on Circuits and Systems*, May 2008
157. C. Peng and C. W. Chen, "IDMA: improving the defense against malicious attack for ad hoc networks based on ARIP," *Proc. SPIE Defense and Security Symposium Conference on "Mobile Multimedia/Image Processing, Security, and Applications*, March 2008
158. B. J. Oh and C. W. Chen, "Analysis of retry limit for supporting VoIP in IEEE 802.11e EDCA WLANs," *Proceedings of 16th International Conf. Computer Communications and Networks*, pp. 464-469, August 2007
159. C. Peng and C. W. Chen, "A new network layer for mobile ad hoc wireless networks based on assignment router identity protocol," *Proceedings of 16th International Conf. Computer Communications and Networks*, pp. 786-791, August 2007
160. W. Guan, J. Cai, J. Zheng and C. W. Chen, "View-based 3D model transmission via mesh segmentation," *Proceedings of IEEE ICME 2007*, Beijing, China, July 2007
161. J. Zhang, H. Li, Q. Liu and C. W. Chen, "A transform domain classification based Wyner-Ziv video codec," *Proceedings of IEEE ICME 2007*, Beijing, China, July 2007
162. D. Song and C. W. Chen, "QoS guaranteed scalable video transmission over MIMO systems with time-varying channel capacity," *Proceedings of IEEE ICME 2007*, Beijing, China, July 2007
163. G. Hua, L. Cao and C. W. Chen, "Distributed source coding under noisy transmission environments," *Proceedings of IEEE ICME 2007*, Beijing, China, July 2007
164. Q. Sun Z. Li, Y. Lian and C. W. Chen, "Joint source-channel-authentication resource allocation for multimedia over wireless networks," *Proceedings of IEEE ISCAS 2007*, pp. 3471 – 3474, New Orleans, May 2007
165. C. Ru, L. Yin, J. Lu and C. W. Chen, "UEP video transmission based on dynamic resource allocation in MIMO OFDM system," *Proceedings of 2007 IEEE Wireless Communications and Networking Conference*, March 2007, Hong Kong
166. D. Song and C. W. Chen, "Novel layered scalable video coding transmission over MIMO wireless systems with partial CSI and adaptive channel selection," *Proceedings of SPIE Conf. on Multimedia on Mobile Devices*, January 2007, San Jose, CA
167. D. Gao, J. Cai and C. W. Chen, "Admission control with traffic shaping for variable bit rate traffic in IEEE 802.11e WLANs," *Proceedings of 2006 IEEE Globecom Conference*, November 2006, San Francisco, CA
168. D. Gao, J. Cai and C. W. Chen, "Capacity analysis of supporting VoIP in IEEE 802.11e EDCA WLANs," *Proceedings of 2006 IEEE Globecom Conference*, November 2006, San Francisco, CA
169. D. Song and C. W. Chen, "QoS guaranteed SVC-based video transmission over MIMO wireless systems with channel state information," *Proceedings of 2006 IEEE International Conference on Image Processing*, October 2006, Atlanta, GA
170. Z. Li, Y. Lian, Q. Sun, C. W. Chen, "Authenticating multimedia transmitted over wireless networks: A content-aware and stream-level approach," *Proceedings of 2006 IEEE International Conference on Multimedia and Expo*, July 2006, Toronto, Canada

171. H. Zheng, C. Ru, L. Yu and C. W. Chen, "Robust video transmission over MIMO-OFDM system using MDC and space time codes," *Proceedings of 2006 IEEE International Conference on Multimedia and Expo*, July 2006, Toronto, Canada
172. M. Wu, G. Hua, and C. W. Chen, "Syndrome-based light-weight video coding for mobile wireless application" *Proceedings of 2006 IEEE International Conference on Multimedia and Expo*, July 2006, Toronto, Canada
173. D. Song and C. W. Chen, "Robust image transmission over MIMO space-time coded wireless systems," *Proceedings SPIE Defense and Security Symposium*, April 2006, Orlando, FL.
174. H. Zheng, L. Yu and C. W. Chen, "Video coding based on overcomplete motion compensated temporal filtering and EREC for robust transmission," *Proc. SPIE Multimedia Systems and Applications*, October 2005, Boston, MA.
175. Y. Yu, J. Lu and C. W. Chen, "A fast content-adaptive spatial error concealment for wireless video communication," *Proc. SPIE Multimedia Systems and Applications*, October 2005, Boston, MA.
176. H. Zheng, L. Yu and C. W. Chen, "Robust video transmission based on Multiple Description Scalable Coding with EREC," *Proceedings of SPIE Conf. Visual Communication and Image Processing*, July 2005, Beijing, China.
177. J. Wu, J. Cai and C. W. Chen, "Constant Quality Constrained Bit Allocation for Leaky Prediction Based FGS Video Streaming," *Proceedings of SPIE Conf. Visual Communication and Image Processing*, July 2005, Beijing, China.
178. M. Wu, D. Song and C. W. Chen, "Multiple description distributed image coding with side information for mobile wireless transmission," (Invited Paper) *Proceedings of SPIE Conf. on Image and Video Communications and Processing*, January 2005, San Jose, CA.
179. H. Zheng, L. Yu and C. W. Chen, "Multiple description scalable coding scheme for mobile wireless video transmission," (Invited Paper) *Proceedings of SPIE Conf. on Multimedia on Mobile Devices*, January 2005, San Jose, CA.
180. M. Wu and C. W. Chen, "Visualization of medical images over wireless handheld devices," *Proceedings SPIE Conf. on Multimedia on Mobile Devices*, January 2005, San Jose, CA.
181. Y. Wang, H. Li and C. W. Chen, "A novel video coding scheme for mobile devices," *Proceedings of International Conference on Mobile and Ubiquitous Multimedia*, October 2004, College Park, MD.
182. D. Song, L. Cao and C. W. Chen, "Multiple description coding based on multiple bitstream wavelet zerotree image compression," *Proceedings of SPIE Multimedia Systems and Applications*, October 2004, Philadelphia, PA.
183. M. Wu, A. Vetro and C. W. Chen, "Multiple description image coding with distributed source coding and side information," *Proceedings of SPIE Multimedia Systems and Applications*, October 2004, Philadelphia, PA.
184. L. Cao and C. W. Chen, "Multiple wavelet-tree based image coding and robust transmission," *Proceedings of SPIE Multimedia Systems and Applications*, October 2004, Philadelphia, PA.
185. J. Cai, X. Li and C. W. Chen, "Layered unequal loss protection for image transmission over packet loss channels with delay constraints," *Proceedings of SPIE Multimedia Systems and Applications*, October 2004, Philadelphia, PA.
186. L. Yin, J. Lu and C. W. Chen, "Joint source-channel decoding scheme for MPEG-2 video transmission," *Proceedings of SPIE Multimedia Systems and Applications*, October 2004, Philadelphia, PA.

187. J. Cai, X. Li and C. W. Chen, "Layered unequal loss protection for progressive image transmission over packet loss channels," *Proc. SPIE Visual Communication and Image Processing 2004*, Vol. 5308, January 2004, San Jose, CA.
188. L. Cao and C. W. Chen, "Error resilient wavelet tree coding for robust image transmission," *Proc. SPIE Image and Video Communications and Processing 2003*, Vol. 5022, January 2003, Santa Clara, CA.
189. M. Wu, J. Cai, and C. W. Chen, "Proxy-based handheld device access to live NASA satellite weather images," *Proc. SPIE Image and Video Communications and Processing 2003*, Vol. 5022, January 2003, Santa Clara, CA.
190. A. Vetro and C. W. Chen, "Rate-reduction transcoding design for wireless video streaming," *Proc. IEEE International Conf. on Image Processing 2002*, September 2002, Rochester, NY.
191. M. Wu, J. Cai and C. W. Chen, "Unequal error protection for proxy-based handheld device access to live NASA satellite weather images," *Proc. 6th World Multi-Conference in Systematics, Cybernetics, and Informatics*, pp. 286-290, Orlando, FL, July 2002.
192. J. Cai and C. W. Chen, "Rate-reduction transcoding design for video streaming applications," *Proc. International Packetvideo Workshop 2002*, April 2002, Pittsburgh, PA.
193. Z. He and C. W. Chen, "Analytic end-to-end rate distortion modeling and control for packet video over wireless network," *Proc. International Packetvideo Workshop 2002*, April 2002, Pittsburgh, PA.
194. J. Cai and C. W. Chen, "A high performance and low complexity video transcoding scheme for video streaming over wireless links," *Proc. 2002 IEEE Wireless Communication and Networking Conference*, March 2002, Orlando, FL.
195. J. Wang and C.W. Chen, "A fast and effective block-matching error concealment scheme," *Proc. 2001 IEEE Pacific-Rim Conference on Multimedia*, October 2001, Beijing, China.
196. L. Cao and C. W. Chen, "Robust image transmission based on wavelet tree coding and EREC," *Proc. IEEE International Conf. on Image Processing 2001*, October 2001, Thessaloniki, Greece.
197. J. Cai and C. W. Chen, "Using pre-interleaving for video streaming over wireless access networks," *Proc. IEEE International Conf. on Image Processing 2001*, October 2001, Thessaloniki, Greece.
198. L. Cao and C. W. Chen, "Wavelet-based multiple hierarchical error resilient entropy coding for robust image transmission," Invited Paper in *World Multi-Conference on Systemics, Cybernetics and Informatics*, July 2001, Orlando, FL.
199. J. Cai and C. W. Chen, "Video streaming: An FEC-based novel approach," Invited Paper in *IEEE Canadian Conference on Electrical and Computer Engineering*, May 2001, Toronto, Canada.
200. J. Cai and C.W. Chen, "FEC-based video streaming over packet loss networks with pre-interleaving," Invited Paper in *International Conf. on Information Technology: Coding and Computing 2001*, April 2001, Las Vegas, Nevada.
201. J. Cai and C. W. Chen, "FEC-based wireless video streaming with pre-interleaving," *Proceedings of IEEE Data Compression Conference*, March, 2001, Snowbird, UT.
202. L. Cao and C. W. Chen, "Scene adaptive multiple coding scheme for robust image transmission," *Proc. IEEE Wireless Communications and Networking Conference*, September 2000, Chicago, IL.
203. J. Cai, Q. Zhang, W. Zhu and C. W. Chen, "A FEC-based error control scheme for wireless MPEG-4 video transmission," *Proc. IEEE Wireless Communications and Networking Conference*, September 2000, Chicago, IL.

204. Y. Yu and C. W. Chen, "SNR scalable transcoding for video over wireless channels," *Proc. IEEE Wireless Communications and Networking Conference*, September 2000, Chicago, IL.
205. L. Cao and C. W. Chen, "A novel product coding and decoding scheme for wireless image transmission," *Proc. IEEE International Conf. on Image Processing 2000*, September 2000, Vancouver, Canada.
206. L. Cao and C. W. Chen, "Product code and recurrent alternative decoding for wireless image transmission," *Proc. IEEE Data Compression Conference 2000*, March 2000, Snowbird, UT.
207. L. Cao and C.W. Chen, "Context based multiple bitstream image transmission noisy channels," *Proc. SPIE Image and Video Communications and Processing 2000*, January 2000, San Jose, CA.
208. J. Cai and C. W. Chen, "Joint source-channel coding with allpass filtering source shaping for image transmission over noisy channels," *Proc. SPIE Image and Video Communications and Processing 2000*, January 2000, San Jose, CA.
209. J. Cai and C. W. Chen, "Operational rate-distortion design for joint source-channel coding over noisy channels," *Proc. IEEE Wireless Communications and Networking Conference*, September, 1999, New Orleans, LA.
210. L. Cao and C. W. Chen, "Multiple hierarchical image transmission over wireless channels," *Proc. IEEE Wireless Communications and Networking Conference*, September, 1999, New Orleans, LA.
211. C. W. Chen, "On fixed length coding schemes for wireless image transmission," (Invited Paper), *Proc. UCSD Center for Wireless Communication Annual Conference*, March 1999, pp. 112-120, San Diego, CA.
212. H. Li and C. W. Chen, "Bi-directional synchronization and hierarchical error correction for robust image transmission," *Proc. SPIE Conf. Visual Communication and Image Processing '99*, pp. 63-72, January 1999, San Jose, CA.
213. J. Cai and C.W. Chen, "Uniform threshold TCQ with block classification for image transmission over noisy channels," *Proc. SPIE Conf. Visual Communication and Image Processing '99*, pp. 208-217, January 1999, San Jose, CA.
214. H. Li and C.W. Chen, "Joint source and channel optimized block TCQ with layered transmission and RCPC," *Proc. International Conf. on Image Processing '98*, pp. 644-648, October 1998, Chicago, IL.
215. H. Li and C.W. Chen, "An enhanced trellis coded quantization scheme for robust image transmission," *Proc. International Symposium on Circuits and Systems '98*, Vol. 4, pp. 9-12, May 1998, Monterey, CA.
216. J. Cai, C.W. Chen and Z. Sun, "Error resilient image coding with rate-compatible punctured Convolutional codes," *Proc. International Symposium on Circuits and Systems '98*, Vol. 4, pp. 110-113, May 1998, Monterey, CA.
217. Z. Sun and C. W. Chen, "Nonuniform threshold trellis coded quantization for image transmission through noisy channels," *Proc. International Symposium on Circuits and Systems '97*, pp. 1129-1132, June 1997, Hong Kong.
218. Z. Sun and C. W. Chen, "Image transform coding using trellis coded quantization through noisy channels," *SPIE Photonics East: Conf. Video Techniques and Software for Full-Service Networks*, Vol. 2915, pp. 13-24, November 1996, Boston, MA.
219. Z. Sun, C. W. Chen and K. J. Parker, "Variable-coefficient fixed-length coding scheme for wavelet based image communication over noisy channels," *SPIE Photonics China: Conf. Electronic Imaging and Multimedia Systems*, November 1996, Beijing, China.
220. C. W. Chen, J. Luo, Z. Sun and K. J. Parker, "Analysis of a wavelet-based compression scheme for wireless image communications," *Proc. SPIE Conf. on Wavelet Applications '96*, pp. 454-465, April, 1996, Orlando, FL.

221. R. Liu, G. Hua and C. W. Chen, "Distributed video coding based on constrained rate adaptive low density parity check codes," *Proceedings of SPIE Conf. Visual Communication and Image Processing*, January 2007, San Jose, CA
222. H. Kim and C. W. Chen, "Dynamic GOP structure for scalable video coding," *Proceedings of SPIE Conf. Visual Communication and Image Processing*, January 2007, San Jose, CA
223. G. Hua and C. W. Chen, "Low punctured turbo codes and zero motion skip encoding strategy for distributed video coding," *Proceedings of 2006 IEEE Globecom Conference*, November 2006, San Francisco, CA
224. Y. Guo, H. Li, S. Pei and C. W. Chen, "A novel fast inter-prediction mode decision for H.264/AVC," *Proceedings of SPIE Conf. on Multimedia on Mobile Devices*, January 2006, San Jose, CA.
225. Y. Hu, Y. Chen, H. Li and C. W. Chen, "An improved spatio-temporal video error concealment algorithm using anisotropic diffusion," *Proc. SPIE Multimedia Systems and Applications*, October 2005, Boston, MA.
226. L. Chen, Z. He, C. W. Chen and M. Isnardi, "A Half D1 MPEG-4 encoder on the BSP-15 DSP," *Proc. SPIE Visual Communication and Image Processing 2004*, Vol. 5308, January 2004, San Jose, CA.
227. Z. He and C. W. Chen, "Effective quality of service for video streaming over networks," *Proc. SPIE Visual Communication and Image Processing 2004*, Vol. 5308, January 2004, San Jose, CA.
228. Z. He and C. W. Chen, "Sequence level rate control and quality smoothing for real-time video recording," *Proc. SPIE Image and Video Communications and Processing 2003*, Vol. 5022, January 2003, Santa Clara, CA.
229. J. Cai, Z. He and C. W. Chen, "Optimal bit allocation for low bit rate video streaming applications," *Proc. IEEE International Conf. on Image Processing 2002*, September 2002, Rochester, NY.
230. Z. He and C. W. Chen, "Video coding using joint temporal-spatial compensation," *Proc. IEEE International Conf. on Multimedia and Expo 2002*, August 2002, Lausanne, Switzerland.
231. Z. He and C. W. Chen, "End-to-end video quality analysis for video streaming over IP networks," *Proc. IEEE International Conf. on Multimedia and Expo 2002*, August 2002, Lausanne, Switzerland.
232. J. Cai and C.W. Chen, "Two-pass video encoding for low bit rate streaming applications," *Proc. 2002 SPIE Visual Communications and Image Processing*, January 2002, San Jose, CA.
233. Z. He and C. W. Chen, "Encoder-based rate shape smoothing for DCT video coding," *Proc. 2002 SPIE Visual Communications and Image Processing*, January 2002, San Jose, CA.
234. Z. He and C. W. Chen, "Optimal bit allocation and accurate rate control for MPEG video coding," *Proc. 2002 SPIE Visual Communications and Image Processing*, January 2002, San Jose, CA.
235. Y. Yu, J. Luo and C. W. Chen, "Synthesis of directional texture based on multiresolution block sampling and constrained block movement," *Proc. IEEE International Conf. on Image Processing 2001*, October 2001, Thessaloniki, Greece.
236. Y. Yu, J. Zhou and C. W. Chen, "A high performance VBR coding algorithm for fixed storage application," *Proc. IEEE International Conf. on Image Processing 2000*, September 2000, Vancouver, Canada.
237. Y. Yu, J. Zhou and C.W. Chen, "A fast block motion estimation algorithm based on combined subsamplings on pixels and search candidates," *Proc. SPIE Image and Video Communications and Processing 2000*, January 2000, San Jose, CA.

238. J. Gu, M. Jurczyk and C. W. Chen, "Impact of ATM traffic control on MPEG-2 video quality," *Proc. International Symposium on Circuits and Systems '98*, May/June 1999, Orlando, FL.
239. J. Luo, C.W. Chen and K. J. Parker, "Image enhancement for low bit rate wavelet-based compression," *Proc. International Symposium on Circuits and Systems '97*, pp. 1081-1084, June 1997, Hong Kong.
240. C. W. Chen, L. Chen and K. J. Parker, "A cellular neural network architecture for Gibbs random field based image segmentation," *SPIE Symposium on Visual Communication and Image Processing '96*, pp. 940-951, March 1996, Orlando, FL.
241. J. Luo, C. W. Chen and K. J. Parker, "On the modeling of subband coefficients in wavelet image coding with clustering-based adaptive quantization," *Proc. 30th Conference on Information Sciences and Systems '96*, pp. 747-752, March 1996, Princeton, NJ.
242. J. Luo, C. W. Chen, K. J. Parker and T. S. Huang, "Adaptive quantization with spatial constraints in subband video compression using wavelet," *Proc. International Conf. on Image Processing '95*, pp. II-583-586, October 1995, Washington DC.
243. J. Luo, C.W. Chen, K. J. Parker and T. S. Huang, "Face location in wavelet-based video compression for high perceptual quality videoconferencing," *International Conf. on Image Processing '95*, pp. I-594-597, October 1995, Washington DC.
244. C. W. Chen, T. S. Huang, J. Luo and K. J. Parker, "On a new adaptive quantization scheme in subband based video coding," *International Conf. on System, Man and Cybernetics '95*, (Invited Paper), pp. 3492-3497, October 1995, Vancouver, Canada.
245. J. Luo, C. W. Chen, K. J. Parker and T. S. Huang, "Three dimensional subband video analysis and synthesis with adaptive clustering in high frequency subbands," *Proc. First IEEE International Conf. on Image Processing*, pp. III-255-259, November 1994, Austin, TX.
246. J. Luo, C. W. Chen, K. J. Parker, "On the application of Gibbs random field in image processing: from segmentation to enhancement," *Proc. SPIE Symposium on Visual Communication and Image Processing*, pp. 1289-1300, September 1994, Chicago, IL. **(Best Student Paper Award)**
247. J. Luo, C. W. Chen, K. J. Parker and T. S. Huang, "A new method for block effect removal in low bit-rate image compression," *Proc. International Conf. on Acoustics, Speech, Signal Processing '94*, pp. V-341-344, April 1994, Australia.
248. X. Yang, H. Li and C. W. Chen, "Medical Image Fusion Based on 3D Steerable Pyramid," Submitted to *SPIE Conf. Visual Communication and Image Processing*, July 2005, Beijing, China.
249. M. Wu, R. Fraser and C. W. Chen, "Computer assisted measurement of cervical length from transvaginal ultrasound images" *Proc. SPIE Medical Imaging 2002*, Vol. 4684, February 2002, San Diego, CA.
250. L. Fan, C. W. Chen, J. M. Reinhardt and E. A. Hoffman, "Evaluation and application of 3D warping and registration from HRCT images," *Proc. SPIE Medical Imaging 2001: Physiology and Function from Multidimensional Images*, Feb. 2001, San Diego, CA.
251. L. Fan and C. W. Chen, "Reconstruction of airway tree based on topology and morphological operations," *Proc. SPIE Medical Imaging 2000: Physiology and Function from Multidimensional Images*, February 2000, San Diego, CA.
252. L. Fan and C.W. Chen, "An Integrated Approach to 3DWarping and Registration from Lung Images," *Proc. SPIE Conf. Developments in X-Ray Tomography II*, July 1999, Denver, CO.
253. L. Fan and C. W. Chen, "LV motion estimation based on the integration of continuum mechanics and estimation theory," *Proc. SPIE Medical Imaging '99: Physiology and Function from Multidimensional Images*, pp. 81-92, February 1999, San Diego, CA.

254. L. Fan and C. W. Chen, "3D warping and registration from lung images," *Proc. SPIE Medical Imaging '99: Physiology and Function from Multidimensional Images*, pp. 459-470, February 1999, San Diego, CA. (**Michael B. Merickel Award for Best Student Paper**)
255. L. Fan and C.W. Chen, "An improved cardiac dynamics analysis with constrained local force model," *Proc. International Conf. on Image Processing '98*, pp. 717-721, October 1998, Chicago, IL.
256. L. Fan and C. W. Chen, "Left ventricle surface reconstruction from volumetric CT images by the fusion of clustering and active contour," *Proc. SPIE Medical Imaging '98*, February 1998, San Diego, CA.
257. J. Luo, H. Li and C. W. Chen, "Ultrasound image compression based on subband decomposition and speckle synthesis," *Proc. International Conf. on Image Processing '97*, pp. 106-109, October 1997, Santa Barbara, CA.
258. J. Tamez-Pena and C. W. Chen, "Local force model for cine CT cardiac dynamics analysis," *Proc. SPIE Medical Imaging '97: Physiology and Function from Multidimensional Images*, pp. 334-345, February 1997, Newport Beach, CA.
259. L. Chen, C. W. Chen and K. J. Parker, "morphological filtering and multiresolution fusion for mammographic microcalcifications detection," *Proc. SPIE Medical Imaging '97: Image Processing*, pp. 938-949, February 1997, Newport Beach, CA.
260. J. Tamez-Pena, C.W. Chen and K. J. Parker, "A local force model for cardiac dynamics analysis based on CT volumetric image sequences," *SPIE AIPR Workshop: Emerging Applications of Computer Vision*, pp. 2-13, October, 1996, Washington, DC.
261. L. Chen, C.W. Chen and K. J. Parker, "Small object detection using morphological filtering and multiresolution analysis with application to microcalcification detection in mammograms," *SPIE AIPR Workshop: Emerging Applications of Computer Vision*, pp. 14-25, October, 1996, Washington, DC.
262. C. W. Chen, L. Chen and K. J. Parker, "Mammographic image enhancement using wavelet-based multiresolution analysis," *Proc. SPIE Conf. on Wavelet Applications '96*, pp. 400-411, April, 1996, Orlando, FL.
263. J. Luo, X. Wang, C.W. Chen and K. J. Parker, "Volumetric medical image compression with three dimensional wavelet transform and octave zerotree coding," *SPIE Visual Communication and Image Processing '96*, pp. 579-590, March 1996, Orlando, FL.
264. J. Tamez-Pena, C. W. Chen and K. J. Parker, "Cardiac dynamic analysis using hierarchical shape models and Gaussian curvature recovery: An integrated approach," *SPIE Symposium on Visual Communication and Image Processing '96*, pp. 904-915, March 1996, Orlando, FL.
265. E. A. Ashton, M. J. Berg, K. J. Parker and C. W. Chen, "A novel volumetric feature extraction technique, with applications to biomedical images," *International Conf. on Image Processing '95*, pp. III-564-567, October 1995, Washington DC.
266. C. W. Chen, W. Lai, F. F. Yin and L. Chen, "Portal image feature extraction by hierarchical region processing technique," *International Conf. on System, Man and Cybernetics '95*, pp. 3561-3566, October 1995, Vancouver, Canada.
267. C. W. Chen, Y. Q. Zhang, J. Luo and K. J. Parker, "Medical image compression with structure preserving adaptive quantization," *SPIE Symposium on Visual Communication and Image Processing '95*, pp. 982-993, May 1995, Taipei, China.
268. F. F. Yin, W. Lai, C.W. Chen, D. F. Nelson, M. C. Schell and P. Rubin, "Development of a computerized portal verification system for radiation therapy of breast cancers," *Proc. SPIE Medical Imaging '95: Image Processing*, pp. 540-545, Feb. 1995, San Diego, CA.

269. C. W. Chen, J. Luo, K. J. Parker and T. S. Huang, "A knowledge-based approach to volumetric medical image segmentation," *Proc. First IEEE International Conf. on Image Processing*, pp. III-493–497, November 1994, Austin, TX.
270. E. A. Ashton, M. J. Berg, K. J. Parker, J. Weisberg, C. W. Chen and L. Ketonen, "Segmentation and feature extraction techniques, with applications to biomedical images," *Proc. First IEEE International Conf. on Image Processing*, pp. III-726–730, November 1994, Austin, TX.
271. C. W. Chen, Y. Q. Zhang and K. J. Parker, "Subband analysis and synthesis of volumetric medical images using wavelet," *Proc. SPIE Symposium on Visual Communication and Image Processing*, pp. 1544–1555, September 1994, Chicago, IL.
272. M. J. Berg, L. Ketonen, K. J. Parker, C. W. Chen, J. Weisberg and E. Ashton, "A novel method for automatically determining the volumes of the hippocampus and other anatomical structure on MRI scans," in *Proc. Annual Meeting of American Epilepsy Society*, pp. 18, December 1993, Miami, FL.
273. C. W. Chen, J. Luo and T. S. Huang, "Left ventricle global motion and shape from CT volumetric data," in *Proc. International Conf. on Acoustics, Speech, Signal Processing '93*, pp. V-101-104, April 1993, Minneapolis, MN.
274. C. W. Chen and T. S. Huang, "On the integration of image segmentation and shape analysis with its application to left ventricle motion analysis," in *Biomedical Image Processing and Biomedical Visualization*, R. S. Acharya and D. B. Goldgof, editors, SPIE Vol. 1905, pp. 218–229, February, 1993.
275. C. W. Chen and T. S. Huang, "Analysis of left ventricle global deformations based on dynamic CT data," in *Proc. International Conf. on Pattern Recognition*, pp. 443–446, August 1992, The Hague, The Netherlands.
276. C. W. Chen and T. S. Huang, "Left ventricle motion analysis by hierarchical decomposition," in *Proc. International Conf. on Acoustics, Speech, Signal Processing '92*, pp. III-273-276, March 1992, San Francisco, CA.
277. C. W. Chen and T. S. Huang, "Surface modeling in heart motion analysis," in *Curves and Surfaces in Computer Vision and Graphics II*, M. J. Silberman and H. D. Tagare, editors, SPIE, Vol. 1610, pp. 360-371, November 1991.
278. C. W. Chen, T. S. Huang and Y. C. Chen, "Model based estimation of left ventricle motion," in *Proc. International Conf. on Acoustics, Speech, Signal Processing '91*, pp. 2481-2484, May 1991, Toronto, Canada.
279. C. W. Chen, T. S. Huang and M. Arrott, "Analysis and visualization of heart motion," in *Biomedical Image Processing II*, A. C. Bovik and V. Howard, editors, SPIE, Vol. 1450, pp. 231-242, February 1991.
280. C. W. Chen and T. S. Huang, "Epicardial motion and deformation estimation from coronary artery bifurcation points," in *Proc. Third International Conf. on Computer Vision*, pp. 456-459, December 1990, Osaka, Japan
281. G. Chen, L. Cao and C. W. Chen, "An efficient decoder for Turbo product codes with multi-error correcting codes," Accepted for *2007 IEEE Wireless Communications and Networking Conference*, March 2007, Hong Kong
282. L. Yao, L. Cao and C. W. Chen, "MAP decoding of variable length codes over noisy channels," *Proc. SPIE Multimedia Systems and Applications*, October 2005, Boston
283. H. Chen, L. Cao and C. W. Chen, "Constrained Decoding for Turbo-CRC Code with High Spectral Efficient Modulation," *Proc. IEEE Wireless Communications and Networking Conference*, March 2005, New Orleans, LA.
284. L. Cao, J. Daigle, C. W. Chen and M. Matalgah, "Complexity reduced Turbo decoding with concatenated detection codes," *Proceedings 2003 IEEE Vehicular Technology Conference*, October 2003, Orlando, FL.

285. L. Cao, C. W. Chen, P. Orlik, D. Gu and J. Zhang, "A trellis-based technique for blind channel estimation and signal detection," *Proc. 6th World Multi-Conference in Systematics, Cybernetics, and Informatics*, pp. 271-275, Orlando, FL, July 2002.
286. L. Cao, C. W. Chen, P. Orlik, J. Zhang and D. Gu, "Blind channel estimation and equalization using Viterbi algorithms," *Proc. IEEE 55th Vehicle Technology Conference*, pp. 1532-1535, May 2002, Birmingham, AL.
287. L. Cao, J. Zhang, P. Orlik, C. W. Chen and M. Miyake, "Study of two $\frac{1}{4}$ turbo decoders in non-frequency selective fast fading channels," *Proc. International Conf. on 3G Wireless and Beyond*, San Francisco, CA, May 2002
288. G. Hua and C. W. Chen, "An adaptive distributed data aggregation based on RCPC for wireless sensor networks," *Proceedings of SPIE Defense and Security Symposium*, April 2006, Orlando, FL.
289. J. S. Lee and C. W. Chen, "IACR: information-aware collaborative routing in wireless sensor networks," *Proceedings of SPIE Defense and Security Symposium*, April 2006, Orlando, FL.
290. G. Hua and C. W. Chen, "Distributed source coding in wireless sensor networks" *Proceedings of IEEE Second International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks*, August 2005, Orlando, FL.
291. Y. Wang and C. W. Chen, "A chain-type wireless sensor network for monitoring long range infrastructures," *Proceedings of SPIE Defense and Security Symposium*, April 2005, Orlando, FL.
292. Y. Wang and C. W. Chen, "An energy-efficient media access control protocol for chain-type wireless sensor networks," *Proceedings of SPIE Defense and Security Symposium*, April 2005, Orlando, FL.
293. T. Kasza and C. W. Chen, "Application-specific Routing Scheme for Indoor Wireless Localization Systems," *Proceedings of SPIE Defense and Security Symposium*, April 2005, Orlando, FL.
294. M. Wu and C. W. Chen, "Collaborative image transmission over wireless sensor networks," *Proc. SPIE Visual Communication and Image Processing 2004*, Vol. 5308, January 2004, San Jose, CA.
295. M. Wu and C. W. Chen, "Multiple bitstream image transmission over wireless sensor networks," *Proc. IEEE International Conf. on Sensors*, pp. 727-731, October 2003, Toronto, Canada.

Granted Patents

1. J. Luo, Y. Yu and C. W. Chen, "Block sampling based method and apparatus for texture synthesis," US7023447B2, Granted 04/04/2006
2. C. Luo, W. Pu, F. Wu, S. Li and C. W. Chen, "Continuous network coding in wireless relay networks," US20090252146A1, Granted 10/08/2009.
3. B. Zhu, C. W. Chen, S. Li and Y. Yang, "MPEG-4 encryption enabling transcoding without decryption," US7953224B2, Granted 05/31/2011.
4. C. Luo, W. Pu, C. W. Chen and F. Wu, "Pull-based data transmission approach," US8305899B2, Granted 11/06/2012
5. C. Luo, H. Lu, W. Pu, F. Wu and C. W. Chen, "Stateful scheduling with network coding for roadside-to-vehicle communication," US8687530B2, Granted 04/01/2014
6. T. Mei, S. Li, W. Yin and C. W. Chen, "Socialized Mobile Photography," US20140354768A1, Granted 12/04/2014.
7. C. Luo, K. Tan, H. Cui, F. Wu and C. W. Chen, "Compressive wireless modulation," US8971433B2, Granted 03/03/2015.

8. C. Luo, H. Cui, F. Wu and C. W. Chen, "Fast decoding based on ZigZag deconvolution for random projection code," US9432056B2, Granted 08/30/2016
9. J. Hu, C. W. Chen, D Zhang and H. H. Yu, "High resolution free-view interpolation of planar structure," US9824486B2, Granted on 11/21/2017
10. C. Luo, H. Cui, C. W. Chen and F. Wu, "Spatial scalable video multicast for heterogeneous MIMO systems," US10432270B2, Granted 10/01/2019