Curriculum Vitae

PERSONAL DATA

Name: **Jenq-Neng Hwang**
Department of Electrical and Computer Engineering
206-685-1603 (office), hwang@uw.edu
206-974-0832 (mobile), https://people.ece.uw.edu/hwang/

EDUCATIONAL RECORD

University of Southern California, 9/85-12/88, Ph.D. EE (Advisor: Sun-Yuan Kung)
National Taiwan University, 9/81-6/83, M.S. EE. (Advisor: Lin-Shan Lee)
National Taiwan University, 9/77-6/81, B.S. EE.

APPOINTMENTS

University of Washington

- Associate Chair for Global Affairs 9/15 – 6/20
- Associate Chair for Research 9/11 – 9/15
- Associate Chair for Research & Development, 9/03 – 10/05.
- Full Professor, 9/99 – present.
- Associate Professor, 9/94 – 8/99.
- Assistant Professor, 8/89 -- 8/94.
- Research Associate (Princeton University, Sun-Yuan Kung), 1/89 – 6/89

INDUSTRIAL COLLABORATIONS

- Advisor Board, AI Think Tank, Seattle, 3/20 -- present
- Technical Consultant, CMMB Vision, Beijing, 4/17 – 9/19
- Technical Consultant, Launch Bottle, Seattle, 9/15 – 3/17
- Technical Consultant, III, Taiwan, 6/12 – 6/14
- Technical Consultant, ITRI, Taiwan, 12/09 – 12/14
- Technical Consultant, HCITC, ITRI South, Taiwan, 3/10 – 12/10.
- Technical Consultant, SoC Center, ITRI, Taiwan, 01/06 – 12/06
- Technical Consultant, Chunghwa Telecomm. Lab. (CHTTL), Taiwan, 01/91 – 03/08
- Technical Consultant, ETRI Korea, 01/06 – 12/07
- Chief Scientist, Digital ERA Communication, Taiwan, 6/04 – 12/07.
- Technical Advisor Board, Voice Box, Redmond, 01/04 – 12/06.
- Technical Consultant, Acucela LLC, Seattle, 03/05 – 06/07.
- Technical Consultant, Nanostring LLC., Seattle, 03/06-12/07.
- Co-Founder and CTO, HomeMeeting Inc., Redmond, WA, 12/99 – 3/03
- Numerous Research Projects from: Microsoft, Intel, Siemens, ITRI, III, ETRI, NOAA, Boeing, T-Mobile, Redback/Ericsson, CHTTL, etc.

GRANTED PATENTS (US)

- “System and Methods for Analyzing Nanoreporters,” with Nanostring Inc. , Seattle, WA, Dec. 2006.
- “Link Layer Packet Loss Classification for Link Adaptation in WLAN,” with Siemens Research, Princeton, March 2008.
- “Cross-Layer QoS Design for Scalable Video over Multirate WLANs,” with Siemens Research, Princeton, July 2008.
- “System for Selecting Transmission Mode under MIMO based on Scheduling number and method,” with NSYSU, Taiwan, June 2015.

- "Cross Layer Power Allocation Methods for Scalable Video Transmission over MIMO Systems," with NSYSU, Taiwan, July 2015.
- "Augmented Reality Interactive System and Dynamic Information Interactive Display Method," with NTUT, Taiwan, April 2017.

HONORS AND AWARDS

Winner of Track 3 and Runner-Ups of Tracks 2 (5th BMTT MOT Challenge) at the 2020 IEEE Computer Vision and Pattern Recognition (CVPR), Seattle WA, June 2020.

Winner of Track 1 and Runner-Ups of Tracks 2,3 (AI City Challenge) at the 2019 IEEE Computer Vision and Pattern Recognition (CVPR), Long Beach CA, June 2019.

Winner of Tracks 1 and 3 (AI City Challenge) at the 2018 IEEE Computer Vision and Pattern Recognition (CVPR), Salt Lake City, June 2018.

Chair Professor, National Chiao Tung University, Hsinchu, Taiwan, April 2018 -- March 2021.

Winner of Track 2 (AI City Applications Track) at the 2017 IEEE Smart World NVIDIA AI City Challenge, San Francisco, August 2017.

Academic Master in International Guest Academic Talents: Beijing University of Post and Telecommunication, 111 Program, Beijing, China, Jan. 2017 – Dec. 2021.

Distinguished Foreign Lecturer: Shanghai University of Engineering Science, Shanghai, China, March 2016 -- present

Guest Professor: Shanghai Jiao Tong University, Shanghai, China, December 2015 – December 2018

Visiting Chair Professor: Chongqing University of Post and Telecommunication, Chongqing, China, 2015 – 2018

Visiting Chair Professor: National Sun-Yet-Sen University, Kaohsiung, Taiwan, 2014 -- 2017

International Honorary Chair Professor: National Taipei University of Technology, Taipei, Taiwan, 2012 -- 2015

Distinguished Foreign Lecturer: Shanghai University, Shanghai, China, Oct. 2012 -- September 2015

IEEE Computer Society Highlight: Our 2009 IEEE Multimedia Magazine article, "An Interactive Attention-Ranking System for Video Search**,**" is highlighted by the Computer Society's monthly issue of Computing Now (http://computingnow.computer.org), which is a Web site featuring specially chosen content from the IEEE Computer Society's 13 magazines. This article is also referenced in the Computing Now

newsletter (http://computingnow.computer.org/newsletter), which reaches more than 63,000 subscribers.

Best Ph.D. Thesis Award, 2009. My jointly supervised Ph.D. dissertation, by Dr. Huang-Chia Shih of the National Tsinghua University, was selected to be one of the 2009 best Ph.D. thesis award from the Computer Vision, Graphics and Image Processing (CVGIP) Society in Taiwan.

Annual Faculty Service Award, University of Washington, Dept. of EE, 2006.

IEEE Fellow, "Contribution to Adaptive Learning Systems," 2001. IEEE Signal Processing Society

Annual Best Paper Award, 1995. (Only 3 papers were chosen out of all IEEE Signal Processing Society's Journal publications, T-SP, T-IP, and T-SAP, T-MI, in the years of 1993-1995).

RESEARCH INTERESTS Machine Learning**,** Computer Vision**,** Multimedia Networking, Pattern Recognition, Smart City/Smart Ocean,

PROFESSIONAL SOCIETY MEMBERSHIP AND SERVICE

1. ***Editorial Board Member****,* - ZTE Communications Journal, 2016--present.
2. ***Editor****,* - ETRI Journal, Information, Telecommunications & Electronics, 2009--present.
3. ***Associate Editor****,* - IEEE Trans. on Image Processing, 2008--2012.
4. ***Editorial Board Member****,* -- IEEE Signal Processing Magazine, 2009 - 2012.
5. ***Editorial Board Member****,* -- International Journal of Digital Multimedia Broadcasting, Hindawi, 2007 - Present.
6. ***Editorial Board Member****,* -- Journal of Signal Processing Systems for Signal, Image, and Video Technology, Kluwer Academic Publishers, 1995 - Present.
7. ***Editor****, -- Journal of Information Science and Engineering,* Academia Sinica, August 2005 – 2011
8. ***Member,*** -- Technical Committee on Multimedia Signal Processing, IEEE Signal Processing Society, 2014 --.
9. ***Member,*** -- Technical Committee on Multimedia, IEEE Communication Society, 2009 --.present
10. ***Member,*** -- Technical Committee on Multimedia Systems and Applications, IEEE Circuits and Systems Society, 2009 -- 2012.
11. ***Guest Editor****,* -- Multimedia over IP, IEEE Trans. on Multimedia, special issue, March 2001.
12. ***Associate Editor****,* - IEEE Trans. on Circuits and Systems for Video Technologies, 1998-2006.
13. ***Associate Editor,*** - IEEE Trans. on Neural Networks, 1992-2000.
14. ***Associate Editor,*** - IEEE Trans. on Signal Processing, 1992-1994.
15. ***Member,*** -- Technical Committee on Neural Networks for Signal Processing, IEEE Signal Processing Society, 1992-2008.
16. ***Founding Member****,* -- Technical Committee on Multimedia Signal Processing, IEEE Signal Processing Society, 1996-2000.
17. ***Secretary****,* -- Technical Committee on Neural Networks for Signal Processing, IEEE Signal Processing Society, 1995-1996.

18. ***Chairman,*** -- Technical Committee on Neural Networks for Signal Processing, IEEE Signal Processing Society, 1997-1998.
19. ***Representative,*** -- IEEE Neural Network Council from IEEE Signal Processing Society, 1997-2000.
20. ***Member,*** -- Technical Committee on Design and Implementation of Signal Processing Systems, IEEE Signal Processing Society, 1990-1996.
21. ***Secretary,*** -- Technical Committee on Neural Systems and Applications, IEEE Circuits and Systems Society, 1989-1991.

ORGANIZATION ACTIVITIES OF INTERNATIONAL CONFERENCES AND FORUMS

1. **General Co-Chair**, -- the 21st IEEE Multimedia Signal Processing (MMSP) Workshop, Kuala Lumpur, Malaysia, September 27-29, 2019.
2. **Technical Co-Chair**, -- the 9th IEEE Annual Information Technology, Electronics, and Mobile Communication (IEMCON) Conference, Vancouver, Canada, Nov. 1-3, 2018.
3. **Conference Co-Chair**, -- The 3rd IEEE International Conference on Image, Vision and Computing (ICIVC), June 27-29, 2018, Chongqing, China.
4. **Conference Program Co-Chair,** IEEE International Conference on Multimedia Expo (ICME), July 2016.
5. **Conference General Co-Chair,** IEEE/IET the 4th International Conference on Audio, Language and Image Processing, Shanghai, China, July 2014.
6. **Conference Executive General Co-Chair,** IET Second International Conference on Smart and Sustainable City, Shanghai, China, August 2013.
7. **Conference Special Session Chair, --** IEEE Int'l Symposium on Circuits and Systems, Beijing, China, May 2013
8. **Conference Co-Chair, -- IEEE** International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS 2012), Taipei, Taiwan Nov. 2012
9. **Conference Tutorial Chair**, - IEEE Midwest Symposium on Circuits and Systems, Seattle, WA, August 2010
10. **Conference Technical Program Co-Chair**, - IEEE Int'l Symposium on Circuits and Systems, Taipei, May 2009.
11. **Conference Technical Program Co-Chair**, - Int'l Computer Symposium (ICS), Taipei, Nov. 2008.
12. **Conference Special Session Co-Chair**, - IEEE Int'l Symposium on Circuits and Systems, Seattle, May 2008.
13. **Conference Chair**, - IASTED Signal & Image Processing Conference, Hawaii, August 2006.
14. **Conference Chair**, - IASTED Internet Multimedia Systems and Applications, Hawaii, August 2006.
15. ***Conference Program Co-Chair,*** - IEEE Int'l Conference on Acoustic, Speech and Signal Processing, Seattle, WA, May 1998.
16. ***Conference Tutorial Chair,*** - IEEE Int'l Conference on Neural Networks, Washington D.C., June 1996.
17. ***Conference General Co-Chair,*** - Int'l Symposium on Artificial Neural Networks, Hsinchu Taiwan, December 1995.
18. ***Conference Publication Chair,*** - Int'l Symposium on Circuits and Systems, Seattle WA, May 1995.
19. ***Conference Program Co-Chair,*** - Int'l Symposium on Artificial Neural Networks, Tainan Taiwan, December 1994.
20. ***Conference Program Chair,*** - IEEE Workshop on Neural Networks for Signal Processing, Ermioni Greece, September 1994.

INVITED INTERNATIONAL SHORT COURSES

1. "Machine Learning for Big Visual Data," 16-hour short course, Beijing University of Posts and Telecommunication, July 2019.
2. "Machine Learning for Big Visual Data," 16-hour short course, Beijing University of Posts and Telecommunication, July 2018.
3. "Multimedia Networking and Services," 16-hour short course, Beijing University of Posts and Telecommunication, July 2017.
4. "Machine Learning for Big Visual Data," 18-hour short course, IEEE International Elite School, March 2017.
5. "Machine Learning for Big Visual Data," 4-week short course, Shanghai University of Engineering Science, Shanghai, China, December 2016.
6. "Wireless Multimedia and IPTV," 3-week short course, Shanghai Jiao Tong University, Shanghai, China, December 2015.
7. "Multimedia over Internet," 2-week short course, The Shanghai University, Shanghai, China, June 2013 and 2014.
8. "Critical Components of Multimedia Networking," 2-week short course, The National Taipei University of Technology, Taipei, Taiwan, July 2012.
9. "Multimedia Compression and Networking," 2-week short course, The Asia University, Taichung, Taiwan, June 2010.
10. "Multimedia Compression and Networking," 2-week short course for Advanced Program in Electronic and Communication Engineering, The University of Danang, Vietnam, Dec. 2009.
11. "Multimedia Networking: A Comprehensive Perspective of the Overall System," 3-day course for National Taiwan University, Taipei, Taiwan, July 2008.
12. "Embedded Real-Time DSP Applications," 5-day course for University IT professors, ministry of IT, Seoul, Korea, August 2007.
13. "Multimedia Networking and Applications: from Theory to Practice," 3-day short course for PCNASE, National Cheng-Kung University, Sept. 2006.
14. "Multimedia Applications," 5-day course for University IT professors, ministry of IT, Seoul, Korea, July 2006.
15. "Multimedia Networking: from Theory to Practice," 4-week short course, national Tsinghua University, Hsinchu, Taiwan, June 2006.
16. "Multimedia Coding and Networking," 54-hour (3 credit) summer course, National Chiao-Tung University, Hsinchu, Taiwan, July-August, 2004.
17. "Multimedia Coding and Networking," 5-day course for University IT professors, ministry of IT, Seoul, Korea, August 2004.
18. "Multimedia Networking," 32-hour intensive course, one-month visiting chair professor, Tsinghua University, Beijing, December 2003.
19. "Multimedia Signal Processing and Networking," Distinguised Lecture Series (5 days), Shanghai Jiao-Tong University, Oct. 2002.
20. ``Neural Networks for Signal Processing: From Theory to Pratice,'' 4-day short course (one day per week), sponsored by Technical University of Denamrk, Lynby, Denmark, 8/14/96-9/16/96.
21. ``Neural Networks for Signal Processing: From Theory to Pratice,'' 4-day short course, sponsored by Shanghai Jiao-Tong University, China, 3/14/96-3/17/96.
22. ``Advanced Neural Network Techniques for Signal/Image Processing: Algorithms, Applications, and Architectures,'' 3-day short course, sponsored by Systems Engineering Research Institute (SERI) of Korean Institute of Science and Technology (KIST) and Electronics and Telecommunications Research Institute (ETRI) of Korean Government, Taejeon, Korea, 8/25-8/27, 1993.
23. ``Neural Network Techniques for Temporal SIgnal Processing,'' 4-hour tutorial lecture for International Symposium on Artificial Neural Networks, Hsinchu Taiwan, December 14-16, 1993.

INVITED LECTURES AND SEMINARS

1. ``Neural Networks in Remote Sensing and Image Processing Applications,'' NASA Goddard Space Flight Center, Greenbelt MD, September 1993.
2. ``Neural Networks in Medical Imaging Applications,'' Siemens Corporate Research, Princeton NJ, September 1993.
3. ``Neural Network Techniques for Intelligent Image Processing,'' corporate lecture series, Meidensha Inc., Tokyo, Japan, October 1993.
4. ``What's Beyong the Back-Propagation Learning,'' School of Business, Dept. of Management, Univ. of Washington, Weekly Dept. Seminar, Feb. 1994.
5. ``What's Beyond The Standard Back-Propagation Learning Networks For Image And Vision Processing,'' distinguished lecture series, Lawrence Livermore National Laboratory, March, 1994.
6. ``Bayesian Inference Techniques for Remote Sensing Inverse Problem Solving,'' NASA Remote Sensing Workshop, Goddard Space Flight Center, February 27 - March, 1995.
7. ``Solving Inverse Problems by Bayesian Iterative Neural Network Inversion,'' plenary talk in International Workshop on Theoretical Aspects of Neural Computation (TANC-97), Hong Kong, May 1997.
8. ``Digital Speech and Audio Coding Techniques,'' Tutorial talk in International Symposium on Multimedia Information Processing (ISMIP), Academic Sinica, Taipei, Taiwan, Dec. 1997.
9. "Intelligent Multimedia Signal Processing," Tutorial talk in Int'l Conf. On Image Processing, Kobe, Japan, Oct. 1999.
10. "Advances in Multimedia Signal Processing and Communication," Siemens special workshop for next generation broadband multimedia communication, Beijing, China, Dec. 1999.
11. "Advances in Multimedia Signal Processing and Communication," Microsoft Research Center, Beijing, China, Dec. 1999.
12. "Multimedia over IP – Is Broadband WAN Ready?" Plenary talk, Cotec 2000, Oct. 2000, Taipei, Taiwan.
13. "Multimedia over IP and Global Communication Infrastructure," Keynote speech, Industry IT Symposium, Kangwon University, Korea, Dec. 2000.
14. "Multimedia Networking over IP and Quality of Service," 3-hour Tutorial, Pacific Rim Conference on Multimedia (PCM2002), Hsinchu, Taiwan, December 2002.
15. "Multimedia Technologies for Distance Learning," 3-hour Tutorial, Int'l Symposium on Communication (ISCOM), Taipei, Taiwan, December 2003.
16. "Ubiquitous Sensor Network and Next Generation Communication," invited talk, ICIST-Kaist 2005 Conference, Korea, July 2005.
17. "Wireless Broadband Communication Systems and Applications," invited keynote speech, 17th VLSI Design/CAD Symposium, Hualien, Taiwan, August 2006.
18. "Are We Ready for the Multimedia over Wireless Broadband: A Challenge of Cross-Layer QoS Optimization," invited keynote speech, Multimedia Networking Systems Conference, Kaohsiung, Taiwan, Dec. 2006.
19. "QoS Challenges of Multimedia over Wireless Broadband," plenary talk for IEEE Mobile WiMax Symposium, Orlando, FL, March 2007.
20. "Multimedia Networking: from Theory to Practice," keynote speech for IASTED Circuits and Systems Conference, Banff, Canada, July 2-4, 2007.
21. " From Intelligent Video Analysis to Video Understanding," keynote speech for the 20th IPPR Conference on Computer Vision, Graphics and Image Processing, Miaoli, Taiwan, Aug.19-21, 2007.
22. " From Video Semantic Interpretation toward Human Behavior Understanding," Keynote speech for IEEE/IET International Conference on Audio, Language and Image Processing, Shanghai, China, July 7-9, 2008

23. " Cross-Layer QoS Optimization for Video over Heterogeneous Wireless Broadband," Keynote speech for First IEEE International Conference on Ubi-Media Computing, Lanzhou, China, July 15-16, 2008
24. " Future Perspective of Intelligent Community Security System," Plenary speech for 22nd Modern Engineering & Technology Seminar (METS), Taipei, Taiwan, November 17-19, 2008
25. " Human Centric Video Event and Behavior Understanding," Keynote speech for Pacific-Rim Conference on Multimedia, Tainan, Taiwan, Dec. 9-13, 2008
26. "Embedded Intelligence for Video Surveillance over Camera Networks," Plenary speech for the 4th International Symposium on Embedded Technology (ISET 2009), Daegu, South Korea, May. 21-22, 2009
27. "Embedded Intelligence for Large Scale Distributed Camera Networks," Invited talk for the 2009 VLSI Design/CAS Symposium, Hualien Taiwan, August 4-7, 2009
28. "Video QoS over Wireless Broadband -- WLAN, Wireless Ad Hoc and WiMAX Infrastructures," Keynote speech for the 5th Workshop on Wireless, Ad hoc, and Sensor Networks (WASN 2009), NTHU Hsinchu, Taiwan. September 10-11, 2009.
29. “Automated tracking and behavior understanding of human video objects for large scale distributed camera networks,” Invited talk on Automated Image Processing Workshop, NOAA, Sept. 7-9, 2010.
30. “Wireless MediaNets: Application Driven Next Generation Wireless IP Networks,” 3.5-hour Tutorial talk in IEEE Globecom, Miami Florida, Dec. 2010.
31. " Large Scale Real-Time Video Surveillance over Wireless Broadband Networks," opening keynote speech for International Computer Symposium, Tainan, Taiwan, Dec. 16-18, 2010
32. “Video Uplinking and downlinking over 4G Wireless Networks,” invited talk by Qualcomm Research Center, San Diego, March 18, 2011.
33. " Automated Understanding of Video Object Events in a Distributed Smart Camera Network," keynote speech for IEEE International Conference on Advanced Technologies for Communication, Danang Vietnam, Aug. 2-4, 2011.
34. " Real-Time Mobile Video Surveillance over Wireless Broadband Networks," Plenary speech for the 7th International Conference on Wireless Communication, Networking and Computing, Wuhan, China, Sept. 23-25, 2011.
35. “Distributed and Centralized Information Management of Wireless Smart Camera Networks,” Keynote speech, The 7th ACM* Workshop on Wireless Multimedia Networking and Computing (WMUNEP), October 31 – November 4, 2011, Miami, USA
36. “Robust Video Object Tracking in Distributed Camera Networks,” Distinguished Lecture of EE, KAIST, May 8, 2012, Daejeon, Korea
37. “Intelligent Video Analytics over Large Scale Camera Netwokrs,” keynote speech for the 2012 UK-VN Advanced Surveillance Systems Workshop Danang City, Vietnam, September 10th, 2012
38. " Self-Calibrated and Scalable Camera Networks for Consistent Tracking and Activity Recognition of Humans," keynote speech for the 2013 IET Second International Conference on Smart and Sustainable City, Shanghai, China, August 19-20, 2013
39. "Embedded and Coordinated Intelligence for A Large Array of Smart Cameras ," keynote speech for the 8th International Conference on Embedded and Multimedia Computing , Taipei, Taiwan, August 23-25, 2013
40. "Image and Video Processing for Fishery Applications," keynote speech for the 4th IEEE/IET International Conference on Audio, Language and Image Processing , Shanghai, China, July 7-9, 2014
41. "Big Visual Data for Dynamic Monitoring of Physical World ," Plenary talk for the 25th International Conference on Electronics, Communications and Computers (CONIELECOMP'2015) , Cholula, Puebla, Mexico, Feb. 25-28, 2015.

42. "Automated Image/Video Analyses for Fishery Science ," Invited talk for the MCS Emerging Technologies Workshop 3 March to 4 March 2016, Auckland, New Zealand
43. "Cross-Layer QoE and QoC Optimization for Wireless Video Networking ," Keynote Speech for the 11th EAI International Conference on Communications and Networking in China (Chinacom 2016), Chongqing, China, September 24-26, 2016.
44. "Self-Calibration and Online Learning among Multiple Static and Moving Cameras for Real-Time Human Tracking," Keynote speech for the 2016 International Symposium on Information Technology Convergence (ISITC 2016), Oct. 13-15, 2016, Shanghai, China.
45. "Next Generation Mobile Video Networking," Keynote Speech for the 10th EAI International Conference on Mobile Multimedia Communications (Mobimedia 2017), Chongqing, China, July 13-14, 2017.
46. "Machine Learning for Big Fishery Visual Data," Keynote Speech for the Symposium on Emerging Technologies in Fisheries-Dependent Science and Catch Monitoring (147th Annual Meeting of the American Fisheries Society Meeting), Tampa, Florida, August 18-24, 2017.
47. "From Electronic Monitoring of Fishery to Smart Ocean," Keynote speech for the 2017 International Symposium on Information Technology Convergence, Oct. 19-21, 2017, Shijiazhuang, China.
48. "Coordinated Mining of Big Visual Data for Smart City," Keynote speech for the 8th IEEE Annual Computing and Communication Workshop and Conference (CWCC), Jan. 8-10, 2018, Las Vegas, USA.
49. "Coordinated 3D-Information Mining of Big Visual Data for Smart City," Keynote speech for the 10th International Conference on Digital Image Processing (ICDIP), May 11-14, 2018, Shanghai, China.
50. "Dynamic 3D Inference of Big Visual Data for Smart City," Keynote speech for the IEEE 20th International Workshop on Multimedia Signal Processing (MMSP), August 29-31, 2018, Vancouver, Canada.
51. “Electronic Visual Monitoring for the Smart Ocean,” Keynote speech for the 11th International Conference on Digital Image Processing (ICDIP), May 10-13, 2019, Guangzhou, China.
52. “Coordinated 3D World Exploration for Smart Surveillance and Autonomous Driving,” Keynote speech for 16th IEEE International Conference on Advanced Video and Signal-based Surveillance (AVSS), September 18-21, 2019, Taipei.
53. “Multiple Object Tracking in Videos,” Tutorial talk, IEEE ICIP, September 22-29, 2019, Taipei.
54. “Electronic Visual Monitoring for the Smart Ocean,” Keynote speech for 10th IEEE Annual Information Technology, Electronics and Mobile Communication Conference, Vancouver BC Canada, October 17-19, 2019.

PUBLICATIONS

Books Authored/Edited

1. Yu-Hen Hu, Jenq-Neng Hwang, **Neural Networks for Signal Processing Handbook**, CRC Press, July 2001 (edited reference book).
2. Jenq-Neng Hwang, **Multimedia Networking: from Theory to Practice,** Cambridge University Press, April. 2009 (authored textbook).

Book Chapters Authored

1. L. Tsang, D. Davis, R. West, Z. Chen, J. N. Hwang, and D. Winebrenner, ``Passive Microwave Remote Sensing of Snow: Scattering in Snow Based On

Dense Media Theory and Parametric Inversion of Snow Parameters with An Artificial Neural Networks" ESA-NASA Workshop on Passive Microwave Remote Sensing of Land-Atmosphere Interaction, pp. 295-314, VSP Press, Utrecht, The Netherlands, 1995.

2. S.Y. Kung and J.N. Hwang, ``Neural Network Architectures for Robotic Applications,'' Neuro-Control Systems: Theory & Applications, edited by M. M. Gupta and D. H. Rao, pp. 554-570, IEEE Press, 1995.
3. J. N. Hwang, ``Textured Images Modeling and Segmentation,'' The Handbook of Brain Theory and neural Networks, ed. Michael A. Arbib, pp. 971-976, MIT Press, 1995.
4. Jenq-Neng Hwang, ``Neural Network Techniques for Inverse Problems Solving,'' in Theoretical Aspects of Neural Computation: A Multidisciplinary Perspective, ed. by K. Y. Wang, I. King, and D. Y. Yeung. Springer, 1997.
5. Ming-Ting Sun, Sachin Deshpande, Jenq-Neng Hwang, ``Lossless Coders,'' Digital Signal Processing for Multimedia Systems, ed. K.K.Parhi, T.Nishitani, Marcel Dekker Inc., NY., 1998.
6. Chien-Jen Wang and Jenq-Neng Hwang, ``Joint Model- and Feature-Space Adaptation Techniques for Continuous Robust Speech Recognition,'' Computational Intelligence Paradigms in Speech Recognition, CRC Press, 1999.
7. Tzong-Der Wu, Jenq-Neng Hwang, and Ming-Ting Sun, ``Advances in Video Transcoding,'' Multimedia Signal Processing Handbook, ed. L. Guan, S. Y. Kung, and J. Larsen, McGraw Hill, 2000.
8. Sachin Deshpande, Jenq-neng Hwang, and Ming-Ting Sun, ``Multimedia Distance Learning,'' Multimedia Signal Processing Handbook, ed. L. Guan, S. Y. Kung, and J. Larsen, McGraw Hill, 2000.
9. Ying Luo, Jenq-Neng Hwang, Tzong-Der Wu, "Object Based Video Analysis and Interpretation, a book chapter in Multimedia Systems and Content-based Image Retrieval, ed. Sagarmay Deb., Idea Group Inc., 2003.
10. Jiqiang Song, Michael R. Lyu, and Jenq-Neng Hwang, "Framework for Indexing Personal Videoconference Archives," a book chapter in Video Data Management and Information Retrieval, ed. Sagarmay Deb., Idea Group Inc., 2003.
11. Jenq-Neng Hwang, Chih-Wei Huang, David Chang, "Cross-Layer End-to-End QoS for Scalable Video over WiMAX," a book chapter in *Advances in Mobile WiMAX*, John Wiley and Sons, 2007.
12. Victor Gao, Peng-Jung Wu, Yi-Hsien Wang, Jenq-Neng Hwang, "Peer-to-Peer Streaming Systems," a book chapter in *Ubiquitous Multimedia Computing*, ed. Qing Li, Timothy Shih, CRC, 2010.
13. Jenq-Neng Hwang, Victor Gau, "Tracking of Multiple Objects Over Camera Networks with Overlapping and Non-Overlapping Views," a book chapter for Distributed Video Sensor Networks, edited by Bir Bhanu, et al, Springer, 2010.
14. Hongxiang Li, Guanying Ru, Siqian Liu, Hui Liu, Jenq-Neng Hwang, **"***Introduction to Wireless Communications and Digital Broadcasting,"* in Wireless Communications and Broadcasting: Circuits and Signal Processing, Fa-Long Luo (Ed.), Cambridge University Press, 2011
15. Kuan-Hui Lee, Chun-Te Chu, Younggun Lee, Zhijun Fang, and Jenq-Neng Hwang, "Consistent Human Tracking over Self-Organized and Scalable Multiple-Camera Networks," in Distributed Embedded Smart Cameras: Architectures, Design and Applications, Christophe Bobda et al, (ed.), Ch. 9, pp. 189-210, Springer, March 2014.
16. Meng-Che Chuang, Jenq-Neng Hwang, Kresimir Williams, " Supervised and Unsupervised Feature Extraction Methods for Pattern Recognition, " in Handbook of Pattern Recognition and Computer Vision, 5th ed., C. H. Chen et al. (ed.), Ch. 1.9, pp. 159-174, 2016.
17. M.-C. Chuang, J.-N. Hwang, K. Williams, "Automatic Live Fish Segmentation and Recognition for Trawl-Based Cameras," *Computer Vision and Pattern Recognition in Environmental Informatics*, IGI Global, 2015

Referred Archival Journals

1. J. N. Hwang and L. S. Lee, ``Dynamic Data Compression Algorithms in Speech Coding,'' Journal of the Chinese Institute of Engineers, 8(3):261-270, August 1985
2. S. Y. Kung, S. C. Lo, S. N. Jean and J. N. Hwang, `` Wavefront Array Processors: from Concept to Implementation,'' IEEE, Computer Magazine, special issue on systolic array, 20(7):18-33, July 1987.
3. S.Y. Kung, J.N. Hwang, ``A Unified Systolic Architecture for Artificial Neural Networks,'' Journal of Parallel and Distributed Computing, special issue on Neural Networks, 6(2):358-387, April 1989.
4. J.N. Hwang, S.Y. Kung, ``Parallel Algorithms/Architectures for Artificial Neural Networks,'' Journal of VLSI Signal Processing, 1(3):221-251, November 1989.
5. S.Y. Kung and J.N. Hwang, ``Neural Network Architectures for Robotic Applications,'' IEEE Trans. on Robotics and Automation, special issue on Computational Algorithms and Architectures in Robotics and Automation, 5(5):641-657, October, 1989.
6. J.N. Hwang, J.A. Vlontzos, and S.Y. Kung, ``A Systolic Neural Network Architecture for Hidden Markov Model,'' IEEE Trans. on Acoustics, Speech, and Signal Processing, 37(12):1967-1979, December 1989.
7. S.Y. Kung, J.A. Vlontzos, and J.N. Hwang, ``VLSI Array Processors for Neural Network Simulation,'' Journal of Neural Network Computing, 1(4):5-20, Spring 1990.
8. S. Y. Kung and J. N. Hwang, `` Systolic Architectures for Kalman Filtering,'' IEEE Trans. on Acoustics, Speech, and Signal Processing, 39(1):171-182, January 1991.
9. J. N. Hwang, J. J. Choi, S. Oh, and R. J. Marks II, ``Query Based Learning Applied to Partially Trained Multilayer Perceptrons,'' IEEE Trans. on Neural Networks, 2(1):131-136, January 1991.
10. J.N. Hwang and J. A. Ritcey, ``Systolic Architectures for Radar CFAR Detectors,'' IEEE Trans. on Acoustics, Speech, and Signal Processing, 39(10):2286-2295, October 1991.
11. D. Hoskins, J. N. Hwang, J. Vagners, ``Iterative Inversion of Neural Networks and Its Application to Adaptive Control,'' IEEE Trans. on Neural Networks, 3(2):292-301, March 1992.
12. J. N. Hwang, H. Li, M. Maechler, D. Martin, J. Schimert, ``Projection Pursuit Learning Networks for Regression,'' Int'l Journal of Engineering Applications of Artificial Intelligence, special issue on ``Neural Networks and Parallel Processing,'' 5(3):193-204, May 1992.
13. J. Holt and J. N. Hwang, ``Finite Precision Error Analysis for Neural Network Hardware Implementations,'' IEEE Trans. on Computers, 42(3):281-290, March 1993.
14. K. Yoshitomi, A. Ishimaru, J. N. Hwang, and J. S. Chen, ``Surface Roughness Determination Using Spectral Correlations of Scattered Intensities and Artificial Neural Network Technique,'' IEEE Trans. on Antennas and Propagation, 41(4):498-502, April 1993.
15. D. T. Davis, Z. Chen, L. Tsang, J. N. Hwang, and A.T.C. Chang, `` Retrieval of Snow Parameters by Iterative Inversion of a Neural Network,'' IEEE Trans. on GeoScience and Remote Sensing, 31(4):842-852, July 1993.
16. J. N. Hwang, Y. H. Tseng, ``Mental Image Transformation for 3D Motion Estimation,'' Int'l Journal of System Engineering, (1994)4:183-194, Springer Verlag, UK, 1994.

17. J. N. Hwang, S. R. Lay, M. Maechler, D. Martin, J. Schimert, ``Regression Modeling in Back-Propagation and Projection Pursuit Learning,'' IEEE Trans. on Neural Networks, 5(3):342-353, May 1994.
18. J. N. Hwang, S. R. Lay, A. Lippman ``Nonparametric Multivariate Density Estimation: A Comparative Study,'' IEEE Trans. on Signal Processing, pp. 2795-2810, October 1994.
19. R. M. Haralick, A.K. Somani, C.Wittenbrink, R.Johnson, K. Cooper, L.G. Shapiro, I.T. Phillips, J.-N. Hwang, W. Cheung, Y.-H. Yao, C.-H. Chen, L. Yang, B. Daugherty, B. Lorbeski, K. Loving, T. Miller, L. Parkins, and S.L. Soos, ``Proteus: A Reconfigurable Computational Network for Computer Vision,'' Machine Vision and Applications, 8(2):85-100, 1995.
20. Z. Wang, J. N. Hwang, B. R. Kowalski, ``ChemNets: Theory and Application,'' Analytical Chemistry, 67(9):1497-1504, May 1995.
21. J. N. Hwang, ``Book Review for Neural Networks: A Comprehensive Foundation,'' IEEE Trans. on Neural Networks, 6(4):1019-1021, July 1995.
22. D. T. Davis, Z. Chen, J. N. Hwang, L. Tsang, and E. Njoku, "Solving Inverse Problems by Bayesian Iterative Inversion of a Forward Model with Application to Parameter Mapping using SMMR Remote Sensing Data," 33(5):1182-1193, IEEE Trans. on GeoScience and Remote Sensing, September 1995.
23. Greg. I. Chiou, J. N. Hwang, ``A Knowledge Driven Stochastic Active Contour Model (KBS-SNAKE) for Contour Finding of Distinct Features,'' IEEE Trans. on Image Processing, 4(10):1407-1416, October 1995.
24. J. N. Hwang, S. S. You, S. R. Lay, I. C. Jou, ``The Cascaded Correlation Learning: A Projection Pursuit Perspective,'' IEEE Trans. on Neural Networks, 7(2):278-289, March 1996.
25. Y. H. Tseng, J. N. Hwang, and Florence Sheehan, "Three-Dimensional Object Representation and Invariant Recognition Using Continuous Distance Transform Neural Networks," IEEE Trans. on Neural Networks, special issue on Pattern Recognition, 8(1):141-147, January 1997.
26. S. Y. Moon, J. N. Hwang, ``Robust Speech Recognition Based on Joint Model and Feature Space Optimization of Hidden Markov Models,'' IEEE Trans. on Neural Networks, 8(2):194-204, March 1997.
27. Greg. I. Chiou, J. N. Hwang, ``Lipreading based on Color Video,'' IEEE Trans. on Image Processing, Vol. 6, No. 8, pp. 1192-1194, August 1997.
28. Daniel T. Davis and Jenq-Neng Hwang, ``Solving Inverse Problems by Bayesian Iterative Inversion of a Forward Model with Ground Truth Incorporation,'' IEEE Trans. on Signal Processing, special issue for Neural Networks for Signal Processing, 45(11):2749-2757, Nov. 1997.
29. J.N. Hwang, S.Y. Kung, M. Mahesan, and J. C. Principe, ``The Past, Present, and Future of Neural Networks for Signal Processing,'' IEEE Signal Processing Magazine, Vol. 14, No. 6, pp. 28-48, Nov. 1997.
30. Daniel T. Davis and Jenq-Neng Hwang, ``Expanding Gaussian Kernels for Conditional Distribution Estimation,'' IEEE Trans. on Signal Processing, 46(1):269-275, Jan. 1998.
31. Ming-Ting Sun, Tzong-Der Wu, and Jenq-Neng Hwang, ``Dynamic Bit-Allocation in Video Combining for Multipoint Conferencing,'' IEEE Trans. on Circuits and Systems, Part II, Vol. 45, No. 5, pp. 644--648, 1998.
32. Y. H. Tseng, J. N. Hwang, and Florence Sheehan, ``3-D Heart Contour Delineation and Motion Estimation of Ultrasound Images Using Continuous Distance Transform Neural Networks,'' Journal of VLSI Signal Processing, special issue on Neural Networks for Medical Imaging, Vol. 18, No. 3, pp. 207-218, April 1998.
33. San-Yuan Kung and Jenq-Neng Hwang, ``Neural Networks for Intelligent Multimedia Processing,'' Proceedings of the IEEE, Vol. 86, No. 6, pp. 1244-1272, June 1998 .

34. Chun Yuan, Eugene Lin, and Jenq-Neng Hwang, ``Closed Contour Edge Detection of Blood Vessel Lumen and Outer Wall Boundaries in Black-blood MR Images,'' Magnetic Resonance Imaging, 17(2):257-266, 1999.
35. L. L. Wilson, L. Tsang, and J. N. Hwang, ``Mapping Snow Water Equivalent in Mountainous Areas by Combining a Spatially Distributed Snow Hydrology Model with Passive Microwave Remote Sensing Data,'' IEEE Trans. on GeoScience and Remote Sensing, 37(2): 690-704, March 1999.
36. Austin Lan, Anthony Nguyen, Jenq-Neng Hwang, ``Scene Context Dependent Reference Frame Placement for MPEG Video Coding,'' IEEE Trans. on Circuits and Systems for Video Technology, 9(3):478-489, March 1999.
37. Michael W. Chang, Eugene Lin, and Jenq-Neng Hwang, ``Contour Tracking Using A Knowledge-Based Snake Algorithm to Construct 3-D Pharyngeal Bolus Movement,'' Dysphagia, 1999, Fall 14(4):219-227.
38. Eugene Lin, Jenq-Neng Hwang and Michael Chang, ``In Search for Proper Boundary Conditions of Pharyngeal Bolus Movement using Neural Network Inversion,'' International Journal of Knowledge Based Intelligent Engineering Systems. vol.3, no.3; July 1999; pp.172-177.
39. W. J. Chen and J. N. Hwang, ``Ordered Statistics Decoding of Linear Block Codes on the WSSUS Multipath Channel,'' IEEE Journal on Selected Areas in Communications: Wireless Communications Series, Vol. 18, No. 11, pp. 2227-2239, November 2000.
40. Changick Kim and Jenq-Neng Hwang, "Fast and Automatic Video Object Segmentation and Tracking for Content-Based Applications," IEEE Transactions on Circuits and Systems for Video Technology (CSVT). 12(2):122-129, Feb. 2002.
41. Changick Kim and Jenq-Neng Hwang, "Video Object Extraction for Object-Oriented Applications," Journal of VLSI Signal Processing - Systems for Signal, Image, and Video Technology, 29(1/2):7-22, August, 2001.
42. Changick Kim and Jenq-Neng Hwang, "Object-Based Video Abstraction for Video Surveillance Applications," IEEE Transactions on Circuits and Systems for Video Technology (CSVT). Vol. 12, No. 12, pp. 1128-1138, December. 2002.
43. Sachin G. Deshpande, and J.-N. Hwang, "A Real-Time Interactive Virtual Classroom Multimedia Distance Learning System," IEEE Transactions on Multimedia, 3(4):432-444 December, 2001.
44. C. T. Chen, B. Nijssen, J. Guo, L. Tsang, J. N. Hwang, and D. P. Lettenmaier, "Passive Microwave Remote Sensing of Snow Constrained by Hydrological Simulations," IEEE Trans. on GeoScience and Remote Sensing, 39(8):1744-1756, August, 2001.
45. Jonas W. J. Chen, Jenq-Neng Hwang, "The CBERC: A Content-Based Error Resilient Coding Technique for Packet Video Communication," IEEE Trans. on CSVT, 11(8):974-980, August 2001.
46. Han C., Hatsukami T.S., Hwang J.N., Yuan C., "A fast minimal path active contour model", *IEEE Transaction of Image Processin*g, vol.6, pp. 865-873, June 2001.
47. K.H. Choi, Ying Luo, Jenq-Neng Hwang, "Hidden Markov Model Inversion For Audio-to-Visual Conversion in an MPEG-4 Facial Animation System, " Journal of VLSI Signal Processing - Systems for Signal, Image, and Video Technology, 29(1/2):51-62, August, 2001.
48. D. X. Xu, M. S. Ferguson, J. N. Hwang, C. Yuan, "Segmentation of Multi-Channel Image with Markov Random Field Based Active Contour Model, " Journal of VLSI Signal Processing Systems for Signal, Image and Video Technology, 31(1): 45-55, May 2002.
49. Anthony G. Nguyen, Jenq-Neng Hwang, "A Novel hybrid HVPC/Mathematical Model Rate Control for Low-Bit-Rate Streaming Video," Image Communication Journal, Elsevier Science Pub., Vol. 17, Issue 5, pp. 423-440, May 2002.
50. Avakian, R. E. Kalina, H. Sage, A. H. Rambhia, K. E. Elliott, E. L. Chuang, J. I. Clark, J. N. Hwang, P. Parsons-Wingerter, "Fractal Analysis of Region based

Vascular in the Normal and Non-Proliferative Diabetic Retina," International Journal of Current Eye Research, 24(4):274-280, Oct. 2002.
51. Han C., Williams S.K., Hatsukami T.S., Hwang J.N., Yuan C., "Detecting objects in image sequences using rule-based control in an active contour model," *IEEE Trans. Beomedical Engineerin*g, 50(6):705-710, 2003.
52. Jianjun Guo ., Leung Tsang, Edward G.Josberger, Andrew W. Wood, Jenq-Neng Hwang ., Dennis P. Lettenmaier, "Mapping the Spatial Distribution and Time Evolution of Snow Water Equivalent with Passive Microwave Measurements," IEEE Trans. on GeoScience and Remote Sensing, 41(3):612-621, 2003.
53. Shih-Cheng Chang, Jar-Ferr Yang, Chi-Feng Lee, Jenq-Neng Hwang, "A Novel Rate Predictor Based on Quantized DCT Indices and Its Rate Control Mechanism," Signal Processing: Image Communication, Elsevier Science Pub., (18):427-441, 2003.
54. Ying Luo, Tzong-Der Wu, Jenq-Neng Hwang, "Object-based Analysis and Interpretation of Human Motion in Sports Video Sequences by Dynamic Bayesian Networks," Computer Vision and Image Understanding, Vol. 92, Issues 2-3, pp. 192-216, special issue on Video Retrieval and Summarization, November 2003.
55. K.H. Choi and Jenq-Neng Hwang, "Robust Audio-To-Visual Conversion Using Constrained Optimization," IEEE Transaction on Signal Processing, June 2004.
56. Qiang Liu, JaeJun Yoo, Byung-Tae Jang, KyoungHo Choi, and Jenq-Neng Hwang, "A scalable VideoGIS system for GPS-guided vehicles," Signal Processing: Image Communication, Vol. 20, No. 3, pp. 205-208, March 2005.
57. K. H. Choi and Jenq-Neng Hwang, "Automatic Creation of a Talking Head from A Video Sequence," IEEE Trans. on Multimedia, 7(4):628-637, August 2005.
58. Hsu-Feng Hsiao, Jenq-Neng Hwang, "A Max-Min Fairness Congestion Control for Streaming Layered Video," IEEE T-CSVT, 16(9):1074-1085, Sept. 2006.
59. Changick Kim, Jungwoo Park, Jaeho Lee, and Jenq-Neng Hwang, "Fast Extraction of Objects of Interest from Images with Low Depth of Field,", ETRI Journal, Information, Telecommunications and Electronics, 29(3):353-362, June 2007.
60. J. L. Lin, W. L. Hwang, S. C. Pei, and J. N. Hwang, "A Hybrid Coarse/Fine layered Multicast Scheme Based on Hierarchical Bandwidth Inference Congestion Control," IEEE T-CSVT, 18(12):1776-1780, Dec. 2008.
61. Huang-Chia Shih, Jenq-Neng Hwang, and Chung-Lin Huang, "Interactive Attention Ranking for Commercial Sports Videos," IEEE Multimedia Magazine, 16(4):70-81. Oct-Dec. 2009.
62. Timothy K. Shih and Nick C. Tang, Jenq-Neng Hwang, " Exemplar-based Video Inpainting without Ghost Shadow Artifacts by Maintaining Temporal Continuity," IEEE Trans. on Circuits and Systems for Video Technology, 19(3):347-360, March 2009.
63. Huang-Chia Shih, Jenq-Neng Hwang, and Chung-Lin Huang, " Content-based Attention Ranking Using Visual and Contextual Attention Model for Baseball Videos ," IEEE Trans. on Multimedia, special issue on Integration of Context and Content, 11(2):244-255, Feb. 2009.
64. Chih-Wei Huang, Michael Loiacono, Justinian Rosca, Jenq-Neng Hwang, "Airtime Fair Distributed Cross Layer Congestion Control for Real-Time Video over WLAN," IEEE Trans. on Circuits and Systems for Video Technologies, 19(8):1158-1168, August 2009.
65. Peng-Jung Wu, Jenq-Neng Hwang, Chung-Nan Lee, Chii-Chang Gau and Hui-Hsiang Kao, "Eliminating Packet Loss in Peer-to-Peer Streaming Systems," IEEE Trans. on Circuits and Systems for Video Technologies, 19(12):1766-1780, Dec. 2009.
66. Hsu-Yung Cheng, Jenq-Neng Hwang, "Adaptive particle sampling and adaptive appearance for multiple video object tracking," Signal Processing, Elsevier, 89(9):1844-1849, Sept. 2009.

67. Victor Gau, Chih-Wei Huang, Jenq-Neng Hwang, “Reliable Multimedia Broadcasting over Dense Wireless Ad Hoc Networks,” invited survey paper for Special Issue on *Multimedia Communications, Networking, and Applications*, Journal of Communications (JCM), Academic Publisher, 4(9):614-627, Oct. 2009.
68. Hsu-Yung Cheng, Chih-Chang Yu, Chien-Cheng Tseng, Kuo-Chin Fan, Jenq-Neng Hwang, “Environment Classification and Hierarchical Lane Detection for Structured and Unstructured Roads' IET Computer Vision, 4(1):37-49, March 2010.
69. Chih-Chang Yu, Yin-Nong Chen, Hsu-Yung Cheng, Jenq-Neng Hwang and Kuo-Chin Fan, "Connectivity based Human Body Modeling from Monocular Camera," *Journal of Information Science and Engineering*, vol. 26, no. 2, March 2010.
70. Jenq-Neng hwang, “Wireless MediaNets: Application Driven Next Generation Wireless IP Networks,” invited survey paper for ACM-Springer Multimedia System Journal, special issue on Wireless Multimedia Transmission Technology and Application, Vol. 17, pp. 1-35, Nov. 2010.
71. Victor Gau, Jenq-Neng Hwang, “Adaptive Probabilistic Broadcasting over Dense Wireless Ad-Hoc Networks,” International Journal of Digital Multimedia Broadcasting, special issue on "Recent Advances in Wireless Data Broadcasting," vol. 2010, Article ID 741792, 12 pages, 2010. doi:10.1155/2010/741792
72. Shiang-Ming Huang, Jenq-Neng Hwang, Yaw-Chung Chen, “Reducing Feedback Load of Opportunistic Multicast Scheduling over Wireless Systems,” IEEE Communications Letters, 14(12):1179-1181, Oct. 2010.
73. Hsu-Yung Cheng and Jenq-Neng Hwang, “ Integrated Video Object Tracking with Applications in Trajectory-Based Event Detection,” Journal of Visual Communication and Image Representation, 22(7):673-685, July 2011.
74. Timothy Shih, Nick Tang, Josephy Tsai, Jenq-Neng Hwang, “Video Motion Interpolation for Special Effect Applications,” IEEE Trans. on SMC, 41(5): 720-732, September 2011.
75. Chih-Wei Huang, Shiang-Ming Huang, Po-Han Wu, Shiang-Jiun Lin, and Jenq-Neng Hwang, “ OLM: Opportunistic Layered Multicasting for Scalable IPTV over Mobile WiMAX,” IEEE Trans. on Mobile Computing, 11(3): 453-463, March 2012.
76. Hsu-Yung Cheng, Victor Gau, Chih-Wei Huang, Jenq-Neng Hwang, "Advanced formation and delivery of traffic information via video analysis and relayed multicast in heterogeneous networks," *Expert Systems with Applications*, vol. 39, no. 9, Jul. 2012.
77. Shian-Ru Ke, Hoang Le Uyen Thuc, Jenq-Neng Hwang, Jang-Hee Yoo, Kyoung-Ho Choi “ A Review on Video-Based Human Activity Recognition,” accepted by Computers, Special Issue on "Activity Detection and Novel Sensing Technologies", Computers, (2)2:88-131, 2013.
78. Chun-Te Chu and Jenq-Neng Hwang, Hung-I Pai, Kung-Ming Lan “Tracking Human Under Occlusion Based On Adaptive Multiple Kernels With Projected Gradients,” IEEE Trans. on Multimedia, 15(7):1602-1615. November, 2013.
79. Tsang-Ling Sheu, Chia-Nan Lin and Jenq-Neng Hwang, “A Channel Reservation and Preemption Model Using Overlapping Regions in Sector-Based Cellular Networks,” Journal of Wireless Communication and Mobile Computing, John Wiley & Sons, Oct. 2013.
80. Chun-Te Chu and Jenq-Neng Hwang, “Fully Unsupervised Learning of Camera Link Models for Tracking Humans Across Non-overlapping Cameras,” IEEE Trans. on Circuits and Systems for Video Technologies (CSVT), (24)6:979-994, June 2014.
81. Shian-Ru Ke, Hoang Le Uyen Thuc, Jenq-Neng Hwang, Jang-Hee Yoo, and Kyoung-Ho Choi, “Human Action Recognition based on 3D Human Modeling and Cyclic HMMs,” International journal of the Electronics and Telecommunications Research Institute (ETRI), 36(4);662-672, August 2014.
82. Xiangyang Wang, Ying Wang, Wanggen Wan, and Jenq-Neng Hwang, “Object tracking with sparse representation and annealed particle filter,” International

Journal of Signal, Image and Video Processing (SIViP), 8(6): 1059-1068, Springer September 2014.

83. Kuan-Hui Lee and Jenq-Neng Hwang, “Model-Based Vehicle Localization Based on Three-Dimensional Constrained Multiple-Kernel Tracking,” IEEE Trans. on Circuits and Systems for Video Technologies (CSVT), 25(1):38-50, Jan. 2015.
84. Xiang Chen, Jenq-Neng Hwang, Chung-Nan Lee, Shih-I Chen “A Near Optimal QoE-Driven Power Allocation Scheme for Scalable Video Transmissions over MIMO Systems, ” IEEE Journal of Selected Topics in Signal Processing, Special Issue on Visual Signal Processing for Wireless Networks, 9(1):76-88, Jan. 2015.
85. Meng-Che Chuang, Jenq-Neng Hwang, Kresimir Williams, Richard Towler “Tracking Live Fish from Low-Contrast and Low-Frame-Rate Stereo Videos,” IEEE Trans. on Circuits and Systems for Video Technologies (CSVT), 25(1):167-179, Jan. 2015.
86. Po-Han Wu, Chih-Wei Huang, Jenq-Neng Hwang, Jae-Young Pyun, Juan Zhang “Visual Quality Driven Resource Allocation for Real-Time Surveillance Video Uplinking over OFDMA-based Wireless Networks,” IEEE Trans. on Vehicular Technology, 64(7):3233-3246, July 2015.
87. Ming-Kai Jiau, Shih-Chia Huang, Jenq-Neng Hwang, Athanasios V. Vasilakos “Multimedia Services in Cloud-based Vehicular Networks,” IEEE Intelligent Transportation Systems Magazine, in 7(3):62-79, Fall 2015.
88. Kuan-Hui Lee and Jenq-Neng Hwang, “On-Road Pedestrian Tracking across Multiple Driving Recorders,” IEEE Trans. On Multimedia, special issue on “Multimedia: the Biggest Big Data,” 17(9):1429-1438, September 2015.
89. Meng-Che Chuang, Jenq-Neng Hwang, Kresimir Williams, “ A Feature Learning and Object Recognition Framework for Underwater Fish Images, ” IEEE Trans. on Image Processing: 25(4):1862-1872, April 2016.
90. Shih-Chia Huang, Bo-Hao Chen, Sheng-Kai Chou, Jenq-Neng Hwang, and Kuan-Hui Lee, “Smart Car,” IEEE Computational Intelligence Magazine (CIM), 11(4):46-58, November, 2016.
91. Kuan-Hui Lee, Jenq-Neng Hwang, Greg Okopal, and Jim Pitton, “Ground Moving Platform Based Human Tracking Using Visual SLAM and Constrained Multiple-Kernel,” IEEE Trans. on Intelligent Transportation Systems, 17(12):3602-3612, December, 2016.
92. Li Hou, Wanggen Wan, Kuan-Hui Lee, Jenq-Neng Hwang, Greg Okapal, James Pitton “Robust Human Tracking Based on DPM Constrained Multiple-Kernel from A Moving Camera,” Journal of Signal Processing Systems for Signal, Image and Video Technology, 86(1):27-40, January 2017.
93. Xiang Chen, Jenq-Neng Hwang, De Meng, Kuan-Hui Lee, Ricardo L. de Queiroz, Fu-Ming Yeh “A Quality-of-Content (QoC)-based Joint Source and Channel Coding for Human Detections in A Mobile Surveillance Cloud,” special issue on Visual Computing in the Cloud - Mobile Computing, 27(1):19-31, IEEE Trans. on CSVT, Jan. 2017.
94. Xiang Chen, Jenq-Neng Hwang, Jim Ritcey, Chung-Nan Lee, Fu-Ming Yeh “Quality-Driven Joint Rate and Power Adaptation for Scalable Video Transmissions over MIMO Systems,” IEEE Trans. on CSVT, 27(2):366-379, Feb. 2017.
95. Younggun Lee ; Shen-Chi Chen ; Jenq-Neng Hwang ; Yi-Ping Hung, “An Ensemble of Invariant Features for Person Re-Identification,” IEEE Trans. on CSVT, 27(3):470-483, March, 2017.
96. Meng-Che Chuang, Jenq-Neng Hwang, Jian-Hui Ye, Shih-Chia Huang, Kresimir Williams, “Underwater Fish Tracking Underwater Fish Tracking based on Deformable Multiple Kernels,” IEEE Trans. on Systems, Man, Cybernetics: Systems, 47(9):2467-2488, September 2017.
97. Li Hou; Wanggen Wan; Jenq-Neng Hwang; Rizwan Muhammad; Mingyang Yang; Kang Han, “Human tracking over camera networks: A review,” EURASIP J. Adv. Signal Process. 2017:43, December 2017.

98. Younggun Lee, Zheng Tang, Jenq-Neng Hwang “Online-Learning-Based Human Tracking Across Non-overlapping Cameras, ” special issue on Large Scale and Nonlinear Similarity Learning for Intelligent Video Analysis, IEEE Trans. on CSVT, 28(10): 2870-2883, Oct. 2018.
99. Li Chen, Niranjan Balu, Gandor Canton, Jie Sun, Kristi Pimentel, Thomas Hatsukami, Jenq-Neng Hwang, Chun Yuan, “ Development of a Quantitative Intracranial Vascular Features Extraction Tool on 3D MRA Using Semi-automated Open-Curve Active Contour Vessel Tracing. ” Accepted by Magnetic Resonance in Medicine, Aug. 2017.
100. Jounsup Park, Jenq-Neng Hwang, Qiyue Li, Yiling Xu, Wei Huang, “ Optimal DASH-Multicasting over LTE. ” Accepted by IEEE Trans. on Vehicular Technology, Dec. 2017.
101. Wei Huang, Lianghui Ding, De Meng, Jenq-Neng Hwang, Yiling Xu, Wenjun Zhang, “QoE-based Resource Allocation for Heterogeneous Multi-Radio Communication in Software-Defined Vehicle Networks.” IEEE Access, 2018, 6: 3387~3399.
102. Yun-Fu Liu, Da-Wei Jaw, Shih-Chia Huang, Jenq-Neng Hwang, “DesnowNet: Context-Aware Deep Network for Snow Removal. ” IEEE Trans. on Image Processing, 27(6): 3064- 3073, June 2018.
103. Li Hou,Kang Han, Wanggen Wan, Jenq-Neng Hwang, Haiyan Yao, “Normalized Distance Aggregation of Discriminative Features for Person Re-identification. ” Journal of Electronic Imaging, 27(2):023006-1-023006-12, March/April 2018.
104. Xiaoli Zhao, Jenq-Neng Hwang, Zhijun Fang, Guozhong Wang , “Gradient-based adaptive particle swarm optimizer with improved extremal optimization.” Applied Intelligence, 48(12): 4646-4659, December 2018.
105. Gaoang Wang, Jeng-Neng Hwang, Craig Rose, Farron Wallace, “Uncertainty Based Active Learning via Sparse Modeling for Image Classification,” IEEE Trans. on Image Processing, 28(1):316-329, Jan. 2019.
106. Tsung-Wei Huang, Jeng-Neng Hwang, Suzanne Romain, Farron Wallace, “Fish Tracking and Segmentation from Stereo Videos on the Wild Sea Surface for Electronic Monitoring of Rail Fishing," IEEE Trans. on CSVT, 29(10): 3146 - 3158, Oct. 2019.
107. Li Chen, Mahmud Mossa-Basha, Jie Sun, Daniel S. Hippe, Niranjan Balu, Quan Yuan, Kristi Pimentel, Thomas S. Hatsukami,J enq-Neng Hwang, Chun Yuan “Quantification of morphometry and intensity features of intracranial arteries from 3D TOF MRA using the intracranial artery feature extraction (iCafe): A reproducibility study.” Magnetic Resonance Imaging, 57:293-302, April 2019.
108. Jingming Zhao, Juan Zhang, Zhi Li, Jenq-Neng Hwang, Yongbin Gao, and Zhijun Fang “DD-CycleGAN: Unpaired image dehazing via Double-Discriminator Cycle-Consistent Generative Adversarial network . ” Special Issue on Internet of Things (IoT) for In-Vehicle Systems, journal Engineering Applications of Artificial Intelligence Engineering Applications of Artificial Intelligence (EAAI), 82:263-271, June 2019.
109. Zheng Tang, Yen-Shuo Lin, Kuan-Hui Lee, Jeng-Neng Hwang, Jen-Hui Chuang “ESTHER: Joint Camera Self-calibration and Automatic Radial Distortion Correction from Tracking of Walking Humans . ” IEEE Access, 7: J10754 - 10766, anuary 2019.
110. Wei Huang, Lianghui Ding, Guangtao Zhai, Xiongkuo Min, Jenq-Neng Hwang, Yiling Xu, Wenjun Zhang, “Utility-Oriented Resource Allocation for 360-Degree Video Transmission over Heterogeneous Networks.” Digital Signal Processing, Elsevier, 84(2019): 1-14, Jan. 2019.
111. Jounsup Park, Jeng-Neng Hwang, Philip A. Chou, “Rate-Utility Optimized Streaming of Volumetric Media for Augmented Reality.” Accepted by IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 9(1):149 - 162, March 2019.

112. Zhi Li, Juan Zhang, Zhijun Fang, Bo Huang, Xiaoyan Jiang, Yongbin Gao, Jenq-Neng Hwang, “Single Image Snow Removal via Composition Generative Adversarial Networks,” IEEE ACCESS, 7:25016-25025, Feb 2019.
113. Li Chen, Jie Sun, Daniel S Hippe, Niranjan Balu, Quan Yuan, Isabelle Yuan, Xihai Zhao, Rui Li. Le He, Thomas S Hatsukami, Jenq-Neng Hwang, Chun Yuan, “Quantitative Assessment of the Intracranial Vasculature in an Older Adult Population using iCafe,” Neurobiology of Aging, 79:59-65, July 2019.
114. Zheng Tang, Jenq-Neng Hwang, “MOANA: An Online Learned Adaptive Appearance Model for Robust Multiple Object Tracking in 3D,” IEEE Access, 7: 31934 - 31945, March 2019.
115. Gaoang Wang, Jenq-Neng Hwang, Farron Wallace and Craig S. Rose, “Multi-Scale Fish Segmentation Refinement and Missing Shape Recovery,” IEEE Access, 7: 52836 - 52845, April 2019.
116. Junchao Yang, Jiangtao Luo, De Meng and Jenq-Neng Hwang, “QoE-Driven Resource Allocation Optimized for Uplink Delivery of Delay-Sensitive VR Video over cellular Network. ” 7:60672 - 60683, IEEE Access, May 2019.
117. Yang Li, Xiaoyan Jiang, Jenq-Neng Hwang, “Effective person re-identification by self-attention model guided feature learning,” Knowledge-Based Systems, vol. 187, 2019.
118. Y Xu, H Chen, W Zhang, JN Hwang, “Smart Media Transport: A Burgeoning Intelligent System for Next Generation Multimedia Convergence Service over Heterogeneous Networks in China,” IEEE MultiMedia, August 2019.
119. Zhiqian Jiang, Wei Huang, Hao Chen, Yiling Xu, Xu Zhang, Jenq-Neng Hwang, Zhan Ma, Jun Sun, "A Hierarchical Buffer Management Approach to Rate Adaptation for 360-Degree Video Streaming," accepted by IEEE Trans. on Vehicular Technology, September 2019.
120. Renshu Gu, Gaoang Wang, Zhongyu Jiang, Jenq-Neng Hwang, "Multi-Person Hierarchical 3D Pose Estimation in Natural Videos," accepted by IEEE Trans. on CSVT, November 2019.
121. Yanting Zhang, Haotian Zhang, Gaoang Wang, Jie Yang, Jenq-Neng Hwang, "Bundle Adjustment for Monocular Visual Odometry based on Detection of Traffic Signs," IEEE Trans. on Vehicular Technology, 69(1):151-162, Jan. 2020.
122. Yaqing Wang, Chunyan Feng, Caili Guo, Yunfei Chu, Jenq-Neng Hwang, "A Cross-Domain Hierarchical Recurrent Model for Personalized Session-Based Recommendations," accepted by Neurocomputing, November 2019.
123. Anjie Wang, Zhijun Fang, Yongbin Gao, Songchao Tan, Shanshe Wang, Siwei Ma, Jenq-Neng Hwang, "Adversarial Learning for Joint Optimization of Depth and Ego-Motion," accepted by IEEE Trans. on Image Processing, Jan. 2020.
124. Li Chen, Gador Canton, Wenjin Liu, Daniel S. Hippe, Niranjan Balu, Hiroko Watase, Thomas S. Hatsukami, John C. Waterton, Jenq-Neng Hwang, Chun Yuan2 ,"Fully automated and Robust Analysis Technique for Popliteal Artery Vessel Wall Evaluation (FRAPPE) using Neural Network Models from Standardized Knee MRI," Magnetic Resonance in Medicine, Feb. 2020
125. Ren-Hung Hwang, Chih-Yu Wang, Jenq-Neng Hwang,Yu-Ren Lin, and Wei-Yu Chen, “Optimizing Live Layered Video Multicasting over LTE with Mobile Edge Computing, accepted by IEEE Trans. on Vehicular Technology, July 2020.

Fully Referred Conference Proceedings

1. J. N. Hwang, S. N. Jean and L. S. Lee, ``Speech Compression Technique and Combination with Linear Prediction,'' In Proc. Int'l Computer Symposium, pp. 870-880, Taiwan, December 1982.
2. J. N. Hwang and L. S. Lee, ``Dynamic Data Compression Algorithms in Speech Coding,'' In Proc. National Computer Symposium, pp. 430-439, Taiwan, December 1983.

3. S. Y. Kung, J. N. Hwang and S. C. Lo, ``Mapping Digital Signal Processing Algorithms onto VLSI Systolic/Wavefront Arrays,'' In Proc. 20th Annual Asilomar Conf. on Signals, Systems and Computers, pp. 6-12, November 1986.
4. S. Y. Kung, J. N. Hwang and S. C. Lo, ``Systolic/Wavefront Arrays for Image Processing Algorithms,'' In Proc. Intelligent Networks and Machines, MARI87, France, May 1987.
5. S. Y. Kung and J. N. Hwang, ``Systolic Architectures for Kalman Filtering,'' In Proc. 21st Asilomar Conf. on Signals, Systems and Computers, pp 746-751, November 1987.
6. S. Y. Kung and J. N. Hwang, ``Systolic Designs for State Space Models: Kalman Filtering and Artificial Neural Networks,'' In Proc. 26th IEEE Conf. on Decision and Control, pp. 1461-1467, Los Angeles, December 1987.
7. S.Y. Kung, J.N. Hwang and S.W. Sun, ``Efficient Modeling of Multilayer Feed-forward Neural Nets,'' In Proc. IEEE, ICASSP'88, pp. 2160-2163, New York, April 1988.
8. S. Y. Kung and J. N. Hwang, `` An Efficient Triarray Systolic Design for Real-Time Kalman Filtering,'' In Proc. IEEE, ICASSP'88, pp. 2045-2048, April, New York, April 1988.
9. S. Y. Kung, J. N. Hwang, ``Parallel Architectures for Artificial Neural Nets,'' In Proc. IEEE, Int'l Conf. on Neural Networks, Volume 2, pp. 165-172, San Diego, California, July 1988.
10. S. Y. Kung, J. N. Hwang, ``An Algebraic Projection Analysis for Optimal Hidden Units Size and Learning Rate in Back-Propagation Learning,'' In Proc. IEEE, Int'l Conf. on Neural Networks, Volume 1, pp. 363-370, San Diego, California, July 1988.
11. J. N. Hwang, J. A. Vlontzos, and S. Y. Kung, ``Systolic Architectures for Hidden Markov Models,'' In SPIE Visual Comm. and Image Processing III, pp. 328-335, Cambridge, Massachusetts, November 1988.
12. S. Y. Kung and J. N. Hwang, ``A Unifying algorithm/Architecture for Artificial Neural Networks,'' in Proc. IEEE Int'l Conf. on Acoustics, Speech, and Signal Processing, pp. 2505-2508, Scotland, United Kingdom, May 1989.
13. J. N. Hwang and S. Y. Kung, ``A Unifying Viewpoint of Multilayer Perceptrons and Hidden Markov Models,'' in Proc. IEEE Int'l Symposium on Circuits and Systems, pp. 770-773, Portland, Oregon, May 1989.
14. J. N. Hwang, C. H. Chan, ``Iterative Constrained Inversion of Neural Networks and Its Applications,'' In Proc. 24-th Conf. on Information Systems and Sciences, pp. 754-759, Princeton, March, 1990.
15. J.N. Hwang, J. A. Ritcey, ``Systolic Architectures for Radar CFAR Detectors,'' Proc. Int'l Conf. on Acoustics, Speech, and Signal Processing, pp. 1025-1028, Albuguerque, New Mexico, April, 1990.
16. J. N. Hwang, S. Oh, J. J. Choi, and R. J. Marks II, ``Classification Boundaries and Gradients of Trained Multilayer Perceptrons,'' in Proc. Int'l Symposium on Circuits and Systems, pp. 3256-3259, New Orleans, May 1990.
17. J. N. Hwang, C. H. Chan, and R. J. Marks II, ``Frequency Selective Surface Design Based on Iterative Inversion of Neural Networks,'' in Proc. Int'l Joint Conf. on Neural Networks, pp. I 39 - I 44, San Diego, June 1990.
18. J. N. Hwang, J. J. Choi, S. Oh, R. J. Marks II, ``Query Learning based on Boundary Search and Gradient Computation of Trained Multilayer Perceptrons,'' in Proc. Int'l Joint Conf. on Neural Networks, pp. III 57 - III 62, San Diego, June 1990.
19. P. S. Lewis and J. N. Hwang, ``Recursive Least Squares Learning Algorithms for Neural Networks,'' SPIE's 1990 Int'l Symposium on Optical and Optoelectronic Applied Science and Engr., pp. 28-39, San Diego, July 1990.
20. J. N. Hwang, J. M. Jong, ``Systolic Architecture for 2-D Rank Order Filtering,'' in Proc. Int'l Conf. on Application Specific Array Processors, pp. 90-99, Princeton, September 1990.

21. J. N. Hwang and P. S. Lewis, ``From Nonlinear Optimization to Neural Network Learning,'' in Proc. 24th Asilomar Conf. on Signals, Systems, & Computers, pp. 985-989, Pacific Grove, CA, November 1990.
22. M. Maechler, D. Martin, J. Schimert, M. Csoppenszky and J. N. Hwang, ``Projection Pursuit Learning Networks for Regression,'' In Proc. 2nd Int'l Conf. Tools for AI, Washington D.C., pp. 350-358, November 1990.
23. A. K. Arun, C. Wittenbrink, R. M. Haralick, L. G. Shapiro, J. N. Hwang, C. H. Chen, R. Johnson, K. Cooper, ``Proteus System Architecture and Organization,'' in Proc. 5th Int'l Parallel Processing Symposium, pp. 287-294, April 1991.
24. D. T. Davis, J. N. Hwang, and J. S. J. Lee, ``Improved Network Inversion Technique for Query Learning: Application to Automated Cytology Screening,'' in Proc. 4th IEEE Symposium on Computer-Based Medical Systems, pp. 313-320, Baltimore, MD, May 1991.
25. J. L. Holt and J. N. Hwang, ``Finite Precision Error Analysis for Neural Network Learning,'' in Proc. Int'l Joint Conf. on Neural Networks, I:519-525, Seattle WA, July 1991.
26. J. S. J. Lee, J. N. Hwang, D. T. Davis, and A. C. Nelson, ``Integration of Neural Networks and Decision Tree Classifiers For Automated Cytology Screening,'' in Proc. Int'l Joint Conf. on Neural Networks, I:257-262, Seattle WA, July 1991.
27. J. N. Hwang and S. Y. Moon, ``The Temporal Difference Method for Long Term Power Load Forecast,'' in Proc. 1st Int'l Forum on Application of Neural Networks for Power Systems, pp. 41-48, Seattle WA, July 1991.
28. J. N. Hwang, H. Li, ``A Surface Reconstruction Neural Network for Absolute Orientation Problems,'' in Proc. 1991 IEEE Workshop on Neural Networks for Signal Processing, pp. 513-522, Princeton, NJ, September 1991.
29. J.S.J. Lee, J. N. Hwang, E.W. Kelm, ``Image Analysis by Information Decomposition and Synthesis,'' In Proc. 25th Asilomar Conf. on Signals, Systems, & Computers, pp. 1200-1204, Pacific Grove, CA, November 1991.
30. J. N. Hwang, H. Li, M. Maechler, D. Martin, J. Schimert, ``A Comparison of Projection Pursuit and Neural Network Regression Modeling,'' in Neural Information Processing Systems, pp. 1159-1166, Denver CO, November 1991.
31. J. N. Hwang, H. Li, ``A Translation/Rotation/Scaling/Occlusion Invariant Neural Network for 2D/3D Object Classification,'' in Proc. Int'l Conf. on ASSP, pp. II 397-400, San Fransico, March 1992.
32. A. Ishimaru, J. N. Hwang, K. Yoshitomi, and J. S. Chen, ``Remote Sensing of Rough Surface Parameters Using Artificial Neural Network Technique,'' invited talk in International Geoscience and Remote Sensing Symposium, pp. 1072-1074, Houston, Texas, May 1992.
33. Z. Chen, D. T. Davis, L. Tsang, J.N. Hwang, A.T.C. Chang, ``Inversion of Snow Parameters by a Neural Network with Iterative Inversion,'' invited talk in International Geoscience and Remote Sensing Symposium, pp. 1061-1063, Houston, Texas, May 1992.
34. J. N. Hwang, D. T. Davis, L. Tsang, ``Locally Tuned Neural Networks for Ground Truth Incorporation,'' invited talk in International Geoscience and Remote Sensing Symposium, pp. 1064-1066, Houston, Texas, May 1992.
35. D. T. Davis, Jenq-Neng Hwang, ``Boundary Region Data Selection to Improve Classification Performance,'' Int'l Joint Conf. on Neural Networks, pp. I:676-681, Baltimore MD, June 1992.
36. J. N. Hwang, H. Li, ``Invariant Object Recognition via Surface Reconstruction Neural Networks,'' Int'l Joint Conf. on Neural Networks, pp. IV: 184-189, Baltimore MD, June 1992.
37. R. M. Haralick, A. Somani, L. Shapiro, J. N. Hwang, and et al, ``Proteus: A Reconfigurable Computational Network for Computer Vision,'' Int'l Conf. on Pattern Recognition, pp. D43-D57, Hague, The Netherlands, August 1992.

38. J. N. Hwang, H. Li, ``Interactive Query Learning for Isolated Speech Recognition,'' IEEE Int'l Workshop on Neural Networks for Signal Processing, pp. 93-102, Denmark, September 1992.
39. S. Y. Moon, J. N. Hwang, ``Noisy Speech Recognition via Wavelet Coefficient Enhancement,'' IEEE 26th Asilomar Conference on Signals, Systems, and Computers, pp. 1086-1090, Monterey California, October 1992.
40. J. N. Hwang, Y. H. Tseng, ``3D Motion Estimation using Single Perspective Sparse Range Data via Surface Reconstruction Neural Networks,'' IEEE Int'l Conference on Neural Networks, pp. 1696-1701, San Francisco CA, March 1993.
41. J. N. Hwang, T. Y. Chen, ``Gibbs Sampling for Textured Image Segmentation via Neural Network MRF Modeling,'' IEEE Int'l Conference on Neural Networks, pp. 1702-1707, San Francisco CA, March 1993.
42. S. R. Lay, J. N. Hwang, ``Robust Construction of Radial Basis Functions,'' IEEE Int'l Conference on Neural Networks, pp. 1859-1864, San Francisco CA, March 1993.
43. J. N. Hwang, S. R. Lay, A. Lippmann, ``Unsupervised Learning for Multivariate Probability Density Estimation: Radial Basis and Projection Pursuit,'' IEEE Int'l Conference on Neural Networks, pp. 1486-1491, San Francisco CA, March 1993.
44. S. Y. Moon, J. N. Hwang, ``Coordinated Training of Noise Removing Networks,'' IEEE Int'l Conference on ASSP, pp. I 573-576, Minneapolis MN, April 1993.
45. J. N. Hwang, S. R. Lay, R. K. Kiang, ``Robust Construction Neural Networks for Classifications of Remotely Sensed Data,'' in INNS World Congress of Neural Networks, pp. IV 580-584, Portland OR, July 1993.
46. J. N. Hwang, H. Li, ``A Limited Feedback Time Delay Neural Networks,'' in Int'l Joint Conf. on Neural Networks, Nagoya Japan, pp. I 271-274, October 1993.
47. G. I. Chiou, J. N. Hwang, ``A Knowledge Driven Stochastic Active Contour Model (KBS-SNAKE) for Contour Finding of Distinct Features,'' in Int'l Joint Conf. on Neural Networks, Nagoya Japan, pp. III 2057-2060, October 1993.
48. J. N. Hwang, G. I. Chiou, ``A Neural Network Based Active Contour Model for Distinct Feature Finding and Lipreading,'' invited talk in Int'l Symposium on Nonlinear Theory and Its Applications, pp. 577-582, Hawaii, December 1993.
49. J. N. Hwang, S. S. You, S. R. Lay, I. C. Jou, `` From Cascaded Correlation Learning to Projection Pursuit Learning,'' Int'l Symposium on Artificial Neural Networks, pp. E10-E19, Hsinchu, Taiwan, December 1993.
50. S. S. You, J. N. Hwang, I.C. Jou, S. R. Lay, "A New Cascaded Projection Pursuit Network For Nonlinear Regression," Int'l Conf. on ASSP, pp. II 585-588, April 1994, Australia.
51. S. R. Lay, J. N. Hwang, S. S. You, "Extensions To Projection Pursuit Learning Networks With Parametric Smoothers Regression," Int'l Conf. on Neural Networks, pp. 1325-1330, Orlando, Florida, June 1994.
52. J. N. Hwang, Y. H. Tseng, "Neural Network Representation of Continuous 3-D Distance Transform for Invariant Object Recognition," Int'l Conf. on Neural Networks, pp. 4066-4071, Orlando, Florida, June 1994.
53. L. Li, J. Vivekanandan, C. H. Chan, L. Tsang, J. N. Hwang, "Studies on Passive Remote Sensing of Vapor, Liquid, and Ice Water Paths," in Int'l Geo-Science and Remote Sensing Symposium, Pasadena, pp. II 666-668, CA, August 1994.
54. D. T. Davis, J. N. Hwang, L. Tsang, "Solving Remote Sensing Inverse Problems Using Bayesian Modeling To Incorporate Information Sources," in Int'l Geo-Science and Remote Sensing Symposium, pp. 1395-1397, Pasadena, CA, August 1994.
55. J. N. Hwang, C. J. Wang, "Neural Network Inversion Techniques for Missing Data Applications," IEEE Neural Network Workshop on Signal Processing, pp. 22-31, Ermioni, Greece, September 1994.
56. G. I. Chiou, J. N. Hwang, "Image Sequence Classification Using A Neural Network Based Active Contour Model And A Hidden Markov Model," in Int'l Conf. on Image Processing, III:926-930, Austin, Texas, November 1994.

57. Y. H. Tseng, J. N. Hwang, C. Yuan, "Motion Artifact Correction of MRI via Iterative Inverse Problem Solving," in Int'l Conf. on Image Processing, I:871-875, Austin, Texas, November 1994.
58. J. N. Hwang, Y. H. Tseng, "Motion Estimation of Partially Viewed 3-D Objects Based on a Continuous Distance Transform Neural Network," in Int'l Conf. on Image Processing, III:917-921, Austin, Texas, November 1994.
59. J. N. Hwang, C. J. Wang, "Classification of Incomplete Data with Missing Elements," Int'l Symposium on Artificial Neural Networks, pp. 471-477, Tainan, Taiwan, December 1994.
60. S. Y. Moon, J. N. Hwang, ``Robust Inversion of Hidden Markov Models for Noisy Speech Recognition," Int'l Conf. on ASSP, pp. 145-148, Detroit, MI, May 1995.
61. D. T. Davis, J. N. Hwang, ``Expanding Gaussian Kernels for Multivariate Conditional Density Estimation," Int'l Conf. on ASSP, pp. VI 3525-3528, Atlanta GA, May 1996.
62. G. I. Chiou, J. N. Hwang, ``Lipreading from Color Motion Video," Int'l Conf. on ASSP, pp. IV 2156-2159, Atlanta GA, May 1996.
63. R. W. Glenny, J.N. Hwang, and H.T. Robertson, ``Interpretation of Progressive Work Exercise Tests (PWET) Using a Neural Network for Pattern Recognition," Am. J. Respir. Crit. Care Med. 153:A20, May 1996.
64. L. L. Wilson, L. Tsang, and J. N. Hwang, "Mapping snow properties for spatially distributed snow hydrological modeling in mountainous areas using passive microwave remote sensing data", Proc. IEEE International Geoscience and Remote Sensing Symposium (IGARSS'96), Vol. I pp. 130-132, Lincoln, NE, May 1996.
65. D. T. Davis, J. N. Hwang, "Estimating the Multivariate Conditional Density Using Relatively Sparse Training Data Pairs," Int'l Conf. on Neural Networks (ICNN'96), pp. 31-36, Washington D.C., June 1996.
66. J. N. Hwang, Erik Little, "Real Time Recurrent Neural Networks for Time Series Prediction and Confidence Estimation," Int'l Conf. on Neural Networks (ICNN'96), pp. 1889-1894, Washington D.C., June 1996.
67. Yen-Hao Tseng, Jenq-Neng Hwang, and Florence H. Sheehan, "3-D Heart Contour Delineation and Motion Tracking of Ultrasound Images Using Continuous Distance Transform Neural Networks," 1996 IEEE NNSP Workshop, pp. 361-370, Kyoto, Japan, September 1996.
68. K. Y. Lee, C. Yuan, and J.N. Hwang, ``Closed Contour Edge Detection for Lumen Area Extraction from Phase Contrast MR Images," in International society for magnetic resonance in medicine fifth scientific meeting, Vancouver BC., Canada, April 1997.
69. Jenq-Neng Hwang, Chien-Jen Wang, ``Joint Model and Feature Space Optimization For Robust Speech Recognition," in IEEE Int'l Conference on Acoustic, Speech and Signal Processing, pp. 855-858, Munich, Germany, April 1997.
70. Daniel T. Davis, Jenq-Neng Hwang, ``Inverse Problem Solving by Bayesian Iterative Inversion of A Neural Network with Ground Truth Incorporation," IEEE Int'l Conference on Acoustic, Speech and Signal Processing, pp. 3221-3224, Munich, Germany, April 1997.
71. Austin Lan, Jenq-Neng Hwang, ``Context Dependent Reference Frame Placement for MPEG Video Coding," IEEE Int'l Conference on Acoustic, Speech and Signal Processing, pp. 2997-3000, Munich, Germany, April 1997.
72. Jenq-Neng Hwang, Sachin G. Deshpande, and Ming-Ting Sun ``Multimedia Features for Course-on-Demand in Distance Learning," in IEEE International Workshop on Multimedia for Signal Processing, pp. 513-518, Princeton, N.J., June 1997.
73. Jenq-Neng Hwang, Eugene Lin, ``Mixtures of Discriminative Learning Networks with Constant Sensitivity for Automated Cytology Screening," IEEE Workshop on

Neural Networks for Signal Processing, pp. 152-161, Amelia Island Plantation, Florida, September 1997.

74. Yen-Hao Tseng and Jenq-Neng Hwang, ``3-D Heart Border Delineation and Motion Estimation using Ultrasound Transthoracic Images for Assisted Heart Diseases Diagnoses,'' in International Conference on Image Processing, pp. III 543-546, October 1997.
75. Jenq-Neng Hwang, Jeongnam Youn, Sachin Deshpande, Ming-Ting Sun, ``Video Browsing for Course-on-Demand in Distance Learning,'' in International Conference on Image Processing, pp. II 530-533, Santa Barbara, October 1997.
76. Ming-Ting Sun, Tzong-Der Wu, and Jenq-Neng Hwang, ``Dynamic Bit Allocation in Video Combining for Multipoint Video COnferencing,'' International Symposium on Multimedia Information Processing , pp. 350-355, Dec. 1997.
77. Sachin G. Deshpande and Jenq-Neng Hwang, ``A Total Least Squares Motion Estimation for Fast Video Coding,'' International Symposium on Multimedia Information Processing , pp. 362-367, Dec. 1997.
78. Y.Wang, J.N.Hwang, C.T.Chen, L.Tsang, B.Nijssen, D.P.Lettenmaier ``Neural Network Inversion of Snow Parameters by Fusion of Snow Hydrology Prediction and SSM/I Microwave Satellite Measurements,'' International Conference on Acoustics, Speech, and Signal Processing, pp. 1217-1220, Seattle, WA, May 1998.
79. Sachin G. Deshpande and J.-N.Hwang, ``Fast Motion Estimation Based on Total Least Squares for Video Encoding,'' International Symposium on Circuits and Systems, pp. 114-117, Monterey CA, June 1998.
80. J.-N.Hwang, Sachin G. Deshpande, and Ming-Ting Sun, ``Interactive Multimedia Distance Learning,'' IEEE International Symposium on Circuits and Systems, Monterey CA, June 1998.
81. Rosas-Romero Roberto, Jenq-Neng Hwang and Chun Yuan, `` Tracking of 3-D Deformable Objects with Non-Rigid Motion in Medical Imaging,'' 1998 International Conference on Imaging Science, Systems and Technology (CISST'98), Las Vegas, July, 1998.
82. Eugene Lin, Jenq-Neng Hwang and Michael Chang, ``Boundary Conditions of Pharyngeal Bolus Modeling by Neural Network Inversion,'' to appear in IEEE 1998 Neural Networks for Signal Processing Workshop, pp. 467-476, Cambridge UK, September 1998.
83. Chun Yuan, Eugene Lin, and Jenq-Neng Hwang, "Measurements of Blood Vessel Wall Areas in Black-blood MR Images Using Global Minimum Snake Algorithm," Second International Ultrasound/Magnetic Resonance/Noninvasive Conference, Oct. 1998.
84. Jenq-Neng Hwang and Tzong-Der Wu, ``Dynamic Frame Skipping in Video Transcoding,'' IEEE Asilomar Conference, Monterey CA, Nov. 1998.
85. Jenq-Neng Hwang, Tzong-Der Wu, Jia-Wen Lin, ``Dynamic Rate Control in Video Transcoding,'' IEEE Int'l Workshop on Multimedia Signal Processing, Los Angeles, Dec. 1998
86. Wu-Hsiang Jonas Chen and Jenq-Neng Hwang, ``Ordered Statistics Decoding of Linear Block Codes for Robust H.263 Video Transmission in AWGN Channel,'' IEEE Int'l Workshop on Multimedia Signal Processing, Los Angeles, Dec. 1998
87. W. J. Chen and J. N. Hwang, ``Performance of Ordered Statistics Decoding for Robust Video Transmission on the WSSUS Channel,'' IEEE 1999 International Conference on Acoustics, Speech and Signal Processing, Vol. 5, pp. 2447-2450, Phoenix, Arizona, March 1999.
88. A. Rambhia, R. Glenny, and J. N. Hwang, ``Critical Input Data Channels Selection for Progressive Work Exercise Test by Neural Network Sensitivity Analysis,'' IEEE 1999 International Conference on Acoustics, Speech and Signal Processing, Vol. 2, pp. 1097-1100, Phoenix, Arizona, March 1999.
89. Eugene Lin, J. N. Hwang, and C. Yuan, ``Measurement of Blood Vessel Wall Areas in Black Blood MR Images using Global Minimum Snake Algorithm,'' IEEE

1999 International Conference on Acoustics, Speech and Signal Processing, Vol. 6, pp. 3409-3412, Phoenix, Arizona, March 1999.

90. Dongxiang Xu, Jenq-Neng Hwang, Chun Yuan, ``Evaluation of MR Imaging Resolution Based on Shannon Information Theory,'' 7th ISMRM Meeting, Philadelphia, Pennsylvania, May 1999.
91. Dongxiang Xu, Thomas S. Hatsukami, Jenq-Neng Hwang, Chun Yuan, ``Detection and Quantitative Measurement of Atherosclerotic Fibrous Cap in 3D TOF MR Images,'' 7th ISMRM Meeting, Philadelphia, Pennsylvania, May 1999.
92. A. Avakian, A. Rambhia, K. E. Elliot, R. E. Kalina, E. L. Chuang, J. N. Hwang, P. Parsons-Wingerter, ``Computer-Aided Analysis of Human Fundus Fluorescein Angiograms,'' Investigative Ophthalmology & Visual Science (IOVS), p. S122, Fort Lauderdale, Florida, May 1999.
93. Dongxiang Xu, Jenq-neng Hwang, “A Topology Independent Active Contour Tracking,” IEEE Workshop on Neural Networks for Signal Processing, Madison, WI, August 1999.
94. Sachin G. Deshpande, and J.-N. Hwang, "An Interactive Virtual Classroom - Multimedia Distance Learning System," IEEE International Workshop on Multimedia Signal Processing, Copenhagen, Denmake, September 1999.
95. K.H. Choi, Jenq-Neng Hwang, "Baum-Welch HMM Inversion for Audio to Video Conversion", IEEE International Workshop on Multimedia Signal Processing, Sep. 13-15, 1999, Copenhagen, Denmark.
96. ChangIck Kim, Jenq-Neng Hwang, “A Fast and Robust Moving Object Segmentation in Video Sequences,” IEEE Int’l Conf. On Image Processing (ICIP’99), Kobe Japan, October 1999.
97. Dongxiang Xu, Jenq-neng Hwang, Chun Yuan, “A Robust Method of Identifying and Measuring Fibrous Cap in 3D Time-of-Flight MR Image,” IEEE Int’l Conf. On Image Processing (ICIP’99), Kobe Japan, October 1999.
98. Tzong-Der Wu, Jenq-Neng Hwang, “Dynamic Bit Rate Conversion in Multipoint Video Transcoding,” IEEE Int’l Conf. On Image Processing (ICIP’99), Kobe Japan, October 1999.
99. Sanpachai Huvanandana, Changick Kim and Jenq-Neng Hwang, "Reliable and Fast Fingerprint Identification for Security Applications", IEEE International Conference on Image Processing (ICIP'2000), Vancouver, Canada, 10-13 September 2000.
100. W. Jonas Chen, Jenq-Neng Hwang, and H. F Hsiao, " Worst-Case Criterion for Content-Based Error-Resilient Video Coding", IEEE International Conference on Image Processing (ICIP'2000), Vancouver, Canada, 10-13 September 2000.
101. D. X. Xu, C. Yuan and Jenq-Neng Hwang, " Information Theoretic Analysis of Plaque in MR Imaging", IEEE International Conference on Image Processing (ICIP'2000), Vancouver, Canada, 10-13 September 2000.
102. Changick Kim and Jenq-Neng Hwang, "An Integrated Scheme for Object-Based Video Abstraction, " ACM International Multimedia Conference 2000, LA, USA, October 2000.
103. Dongxiang Xu, M.S. Ferguson, Jenq-Neng Hwang and Chun Yuan, “A Novel Segmentation Technique For Quantitative Evaluation of Atherosclerotic Plaque Tissues Using MR Images with Multiple Contrast Weighting,” 9th ISMRM, Glasgow, Scotland, April 21-27, 2001.
104. KyoungHo Choi, Jenq-Neng Hwang, “Creating Virtual Heads from Video Sequences: A Recursive Approach Combining EKF and DFFD,” ICASSP 2001, pp. 1497-1500, Salt Lake, Utah, May 2001.
105. Kisung Lee, Changick Kim, Jenq-Neng Hwang, “Video Indexing/Retrieving based on Video Abstraction and Temporal Modeling,” 5th World Multiconference on Systemics, Cybernetics and Informatics (SCI 2001), Orlando, July 2001.
106. ChangIck Kim, J. N. Hwang, “Object-Based Video Abstraction Using Cluster Analysis,” ICIP2001, Greece, Oct. 2001.

107. Dongxiang Xu, Jenq-Neng Hwang and Chun Yuan, “Atherosclerotic Plaque Segmentation At Human Carotid Artery Based On Multiple Contrast Weighting MR Images,” ICIP’2001, Thessaloniki, Greece, October 7-10, 2001.
108. K.H. Choi and Jenq-Neng Hwang, "A Real-Time System For Automatic Creation of 3D Face Models From A Video Sequence, " IEEE International Conference on Acoustics, Speech, and Signal Processing, Orlando FL, May 2002.
109. J. N Hwang, Y. Luo, “Automatic Object based Video Analysis and Interpretation: A Step toward systematic video understanding,” invited special session talk in ICASSP, Orlando FL, May 2002.
110. Hsu-Feng Hsiao, Qiang Liu, Jenq-Neng Hwang, "Layered Video Over IP Networks by Using Selective Drop Routers,” invited special session talk in ISCAS, Phoenix AZ, May 2002.
111. Jianjun Guo; Leung Tsang; Josberger, E.; Jenq-Neng Hwang, **“**Mapping the spatial distribution and time evolution of snow water equivalent with passive microwave measurements,” IEEE Geoscience and Remote Sensing Symposium, 2002. IGARSS '02. (1) 454 –456.
112. K. H. Choi, J. N. Hwang, “Creating 3-D Speech Driven Talking Heads: A Probabilistic Approach,” to appear in IEEE ICIP2002, Rochester, NY, Sept. 2002.
113. Q. Liu, J. N. Hwang, and C.C. Liu, "Communication Infrastructure for Wide Area Protection of Power Systems," *Presented at CRIS International Conference on Power Systems and Communication Systems Infrastructures for the Future*, Beijing, September 2002.
114. H. F. and J. N. Hwang, “Layered FGS Video over Active Network with Selective Drop and Adaptive Rate Control,” to be presented in *ICASSP 2003*, HongKong, April 2003.
115. Q. Liu and J. N. Hwang, “Application Level Selective Drop for Layered Video over Multicast Networks,” to be presented in *ICASSP 2003*, HongKong, April 2003.
116. S. Huvanandana, S. Malisuwan, J. Santtyanon, J. N. Hwang,” A Hybrid System for Fingerprint Identification,” pp. II952-955, ISCAS, Bangkok Thailand, May 2003.
117. Jiqiang Song, Michael Lyu , Jenq-Neng Hwang and MinCai, 'PICAIS: A Personal Video Conference Archive Indexing System' ”, *ICME 2003*, Baltimore, MD, USA, July 2003.
118. Q. Liu and J. N. Hwang, “End-to-end Available Bandwidth Estimation and Time Measurement Adjustment for Multimedia QoS”, *ICME 2003*, Baltimore, MD, USA, July 2003.
119. Q. Liu and J. N. Hwang, “A New Congestion Control Algorithm for Layered Multicast in Heterogeneous Multimedia Dissemination”, *ICME 2003*, Baltimore, MD, USA, July 2003.
120. Ying Luo and Jenq-Neng Hwang, “Video Sequence Modeling by Dynamic Bayesian Networks: A Systematic Approach from Fine-to-Coarse Grains,” Int’l Conf. On Image Processing (ICIP), Barcelona, Spain, Sept. 2003.
121. Q. Liu, J. J. Yeo, B. T. Jang, K. H. Choi, J. N. Hwang, “Effective Dissemination of Scalable Video and GIS Information In An Intelligent Transportation System,” IEEE Int’l Conf. On Networking, Sensing and Control, Taipei, March 2004.
122. Q. Liu, J. N. Hwang, “On Real Time Remote Display of a Digital Video Recording System,” IEEE Int’l Conf. On Acoustics, Speech and Signal Processing, Montreal, May 2004.
123. H. F. Hsiao and J. N. Hwang, “A Max-Min Fairness Congestion Control for Streaming Layered Video,” , IEEE Int’l Conf. On Acoustics, Speech and Signal Processing, Montreal, May 2004.
124. Q. Liu, J. J. Yeo, K. H. Choi, J. N. Hwang, 'A Scalable VideoGIS System for GPS-Guided Vehicles', IEEE Int’l Conf. On Acoustics, Speech and Signal Processing, Montreal, May 2004.

125. I. Karliga, J. N. Hwang, “A Framework for Fully Automatic Moving Video-Object Segmentation based on Graph Partitioning" IEEE Int’l Conf. On Circuits and Systems, Vancouver, May 2004.
126. Q. Liu and J. N. Hwang, “A Scalable Video Transmission System using Bandwidth Inference in Congestion Control", IEEE Int’l Conf. On Circuits and Systems, Vancouver, May 2004.
127. I. Karliga, J. N. Hwang, Hwa-Jong Kim, “A Framework for Fully Automatic Moving Video-Object Segmentation based on Graph Partitioning and Object Tracking" IEEE MMSP Workshop, Siena, Italy, Oct. 2004.
128. Feng Huang, Jenq-Neng Hwang, Yuzhuo Zhong: An Adaptive Hybrid Mode Decision Scheme for H.264/AVC Video over Unreliable Packet Networks. PCM (2) 2004: 947-956
129. Hsu-Feng Hsiao, Aik Chindapol, James Ritcey, Yaw-Chung Chen, Jenq-Neng Hwang, “A New Multimedia Packet Loss Classification Algorithm for Congestion Control over Wired/Wireless Channels,” IEEE ICASSP 2005, Philadelphia, March 2005.
130. Ying Luo Jenq-Neng Hwang, “A Comprehensive Coarse-to-Fine Grain Sports Video Analysis Framework to Infer 3D Parameters of Video Objects with Application to Tennis Video Sequences,” IEEE ICASSP 2005, Philadelphia, March 2005.
131. Hsu-Feng Hsiao, Jenq-Neng Hwang, “The Dynamics and Stabilities of Layered Congestion Control for Multimedia Streaming,” IEEE ISCAS 2005, Kobe Japan, May 2005.
132. C. Y. Cho, H.S. Chen, J. N. Hwang, J. S. Wang, “A Fast Bitplane Combination Algorithm for Bitplane Coded Scalable Image/Video,” IEEE ISCAS 2005, Kobe Japan, May 2005.
133. Jian-Liang Lin, Soo-Chang Pei, Jenq-Neng Hwang, “Fine-Grain Layered Multicast based on Hierarchical bandwidth Inference Congestion Control,” IEEE ISCAS 2005, Kobe Japan, May 2005.
134. Chih-Wei Huang, JaeJun Yoo, Sung-Hwan Jung, KyoungHo Choi, and Jenq-Neng Hwang, “Object Highlighting and Tracking in a Novel VideoGIS System for Telematics,” IEEE MMSP workshop, Shanghai, Oct. 2005
135. Hsu-Feng Hsiao, James Ritcey, Jenq-Neng Hwang and Aik Chindapol, “Adaptive FEC Scheme for Layered Multimedia Streaming over Wired/Wireless Channels,” IEEE MMSP Workshop, Oct. 2005.
136. Chih-Wei Huang, Aik Chindapol , James Ritcey, and Jenq-Neng Hwang, “Link Layer Packet Loss Classification for Link Adaptation in WLAN,” 4th Annual Conference on Information Sciences and Systems, Princeton, Mar. 2006.
137. Chih-Wei Huang and Jenq-Neng Hwang, “An Embedded Packet Train and Adaptive FEC Scheme for Effective Video Adaptation over Wireless Broadband Networks,” 15th International Packet Video Workshop, Hangzhou China, April 2006.
138. Ibrahim Karliga and Jenq-Neng Hwang, “Analyzing Human Body 3-D Motion of Golf Swing from Single-Camera Video Sequences,” IEEE ICASSP 2006, Toulouse France, May 2006.
139. Chih-Wei Huang, Somsak Sukittanon, James Ritcey, Aik Chindapol, and Jenq-Neng Hwang, “An Embedded Packet Train and Adaptive FEC Scheme for VoIP over Wired/Wireless IP Networks,” IEEE ICASSP 2006, Toulouse France, May 2006.
140. Jenq-Neng Hwang, Ibrahim Karliga, Hsu-Yung Cheng, “An Automatic 3-D Human Behavior Analysis System for Video Surveillance Applications,” IEEE ISCAS 2006, Kos Island, Greece, May 2006.
141. Yi-Chen Chen, Kwang-Cheng Chen, and Jenq-Neng Hwang, “Non-Coherent Detection for SFH/BFSK Interferred by an Uncoordinated FH System,” 4th IEEE Consumer Communications and Networking Conference (CCNC), Las Vegas, Jan. 11-13, 2007.

142. Chih-Wei Huang, Jenq-Neng Hwang, Chih-Wei Chang, “Congestion and Error Control for Layered Scalable Video Multicast over WiMAX,” IEEE Mobile WiMax Symposium, Orlando, FL, March 2007
143. Chih-Chang Yu, Jenq-Neng Hwang, Gang-Feng Ho, Chaur-Heh Hsieh, “Automatic Human Body Tracking and Modeling from Monocular Video Sequences,” IEEE Int’l Conf. on ASSP, Honolulu, Hawaii, April, 2007.
144. Hsu-Yung Cheng, Jenq-Neng Hwang, “Multiple Target Tracking for Crossroad Tracking Utilizing Modified Probabilistic Data Association,” IEEE Int’l Conf. on ASSP, Honolulu, Hawaii, April, 2007.
145. Ibrahim Karliga, Jenq-Neng Hwang, “Extraction and Integration of Human Body Parts for 3-D Motion Analysis of Golf Swing from Single Camera Video Sequences,” IEEE ISCAS, New Orleans, May 2007.
146. Timothy K. Shih, Nick C. Tang, Jenq-Neng Hwang, “Ghost Shadow Removal in Multi-layered Video Inpainting,” IEEE ICME, Beijing, July 2007.
147. Huang-Chia Shih, Jenq-Neng Hwang, Chung-Lin Huang “Video Attention Ranking using Visual and Contextual Attention Model for Content-based Sports Videos Mining ,” IEEE Int'l Workshop on MMSP, Crete, Greece, Oct. 2007.
148. Hsu-Yung Cheng, Chih-Chang Yu, Chien-Cheng Tseng, Kuo-Chin Fan, Jenq-Neng Hwang, Bor-Shenn Jeng “Hierarchical Lane Detection for Different Types of Roads,” IEEE Int'l Conf. on ASSP, Las Vegas, April 2008.
149. Victor Gau, Peng-Jung Wu, Chung-Nan Lee, Jenq-Neng Hwang “A Scheme for Peer-to-Peer Live Streaming with Multi-Source Multicast and Forward Error Correction,” IEEE Int'l Conf. on ASSP, Las Vegas, April 2008.
150. Jing-Xin Wang, Yi-Chen Chen, Alvin W.Y. Su, Jenq-Neng Hwang “Effective Congestion and Error Control for Scalable Video Coding Extension of the H.264/AVC,” IEEE Int'l Conf. on Circuits and Systems, Seattle, May 2008.
151. Victor Gau, Yi-Hsien Wang, Jenq-Neng Hwang“A Hierarchical Push-Pull Scheme for Peer-to-Peer Live Streaming,” IEEE Int'l Conf. on Circuits and Systems, Seattle, May 2008.
152. Peng-Jung Wu, Chung-Nan Lee, Victor Gau, Jenq-Neng Hwang “Overcoming Burst Packet Loss in Peer-to-Peer Live Streaming Systems,” IEEE Int'l Conf. on Circuits and Systems, Seattle, May 2008.
153. Chih-Wei Huang, Michael Loiacono, Justinian Rosca, Jenq-Neng Hwang, “Distributed Cross Layer Congestion Control for Real-Time Video over WLAN,” IEEE Int'l Conf. on Communications, Beijing, China, May 2008.
154. Yi-Hsien Wang, Victor Gau, Trevor Bosaw, Jenq-Neng Hwang, Alan Lippman, and Dan Lieberman, “Flow-based Peer-to-peer Traffic Identification,” to appear in 2008 IEEE Machine Learning for Signal Processing Workshop, Cancun, Mexico, Oct 2008.
155. Chih-Chang Yu, Hsu-Yung Cheng, Jenq-Neng Hwang, Kuo-Chin Fan, “Human Body Modeling with Partial Self Occlusion from Monocular Camera,” to appear in 2008 IEEE Machine Learning for Signal Processing Workshop, Cancun, Mexico, Oct 2008.
156. Hsu-Yung Cheng, Jenq-Neng Hwang, “Resolving Occlusion and Segmentation Errors in Multiple Video Object Tracking,” SPIE Computational Imaging Conference, San Jose, January 2009.
157. Chih-Wei Huang, Po-Han Wu, Shiang-Jiun Lin and Jenq-Neng Hwang, “Layered Video Resource Allocation in Mobile WiMAX Using Opportunistic Multicasting,” IEEE Wireless Communications & Networking Conference, Budapest, Hungary, April 2009.
158. Liangjia Zhu, Jenq-Neng Hwang, Chih-Chang Chen, Ming-Hui Lin, Chen-Lan Yen, “ Real-Time 3D Pose Reconstruction of Human Body from Monocular Video Sequences,” IEEE Int’l Symposium on Circuits and Systems, Taipei, Taiwan, May 2009.

159. Liangjia Zhu, Jenq-Neng Hwang, Hsu-Yung Cheng, “Tracking of Multiple Objects Across Multiple Cameras with Overlapping and Non-Overlapping Views ,” IEEE Int’l Symposium on Circuits and Systems, Taipei, Taiwan, May 2009.
160. Peng-Jung Wu, Jenq-Neng Hwang, Chung-Nan Lee, Yu-Chih Teng, “Receiver Driven Overlap FEC for Scalable Video Coding Extension of the H.264/AVC,” IEEE Int’l Symposium on Circuits and Systems, Taipei, Taiwan, May 2009.
161. Shiang-Ming Huang, Chih-Wei Huang, Po-Han Wu, Jenq-Neng Hwang, Victor Gau, and Yaw-Chung Chen, “Resource Efficient Opportunistic Multicast Scheduling for IPTV Services over WiMAX Networks,” IEEE Vehicular Technology Conference (VTC2010)-Spring, Taipei, Taiwan, May 2010.
162. Po-Han Wu, Yu-Hen Hu, Jenq-Neng Hwang, “Optimal Layered Video IPTV Multicast Streaming over IEEE 802.16e WiMAX Systems,” IEEE Vehicular Technology Conference (VTC2010)-Spring, Taipei, Taiwan, May 2010.
163. Victor Gau, Jenq-Neng Hwang, “A framework for Multi-Object Tracking over Distributed Wireless Camera Networks,” SPIE Conference on Visual Communications and Image Processing 2010 (VCIP2010), Huang-Shan, An Hui, China, July 11-14, 2010.
164. Chi-Kun Lin, Yu-Chen Hong, Chia-Tong Tang, Jenq-Neng Hwang, Jar-Ferr Yang, “Free Viewpoint Video Generation based on Coding Information of H.264/MVC,” SPIE Conference on Visual Communications and Image Processing 2010 (VCIP2010), Huang-Shan, An Hui, China, July 11-14, 2010.
165. Shian-Ru Ke, LiangJia Zhu, Jenq-Neng Hwang, Hung-I Pai, Kung-Ming Lan, C.P. Liao, “Real-Time 3D Human Pose Estimation from Monocular View with Applications to Event Detection and Video Gaming,” IEEE Int’l Conference on Advanced Video and Signal-Based Surveillance (AVSS), Boston MA, August 29 – September 1, 2010.
166. Chun-Te Chu, Jenq-Neng Hwang, Hung-I Pai, Kung-Ming Lan “ Robust Video Object Tracking based on Multiple Kernels with Projected Gradients,” The IEEE Int'l Conf. on ASSP (ICASSP 2011), Prague, Czech Republic, May 22-27, 2011.
167. Po-Han Wu, Jenq-Neng Hwang, “ Cross-Layer Channel-Quality-Fair Scheduling for Video Uplink of Camera Networks over WiMAX,” The IEEE Int'l Conf. on Communication (ICC 2011), Kyoto Japan, June 5-9, 2011.
168. Shian-Ru Ke, Jenq-Neng Hwang, Kung-Ming Lan and Sheng-Zheng Wang “ View-Invariant 3D Human Body Pose Reconstruction using a Monocular Video Camera ,” ACM/IEEE Int'l Conf. on Distributed Smart Cameras (ICDSC 2011), Ghent Belgium, August 22-25, 2011.
169. Chun-Te Chu, Jenq-Neng Hwang, Shen-Zheng Wang and Yi-Yuan Chen “ Human Tracking by Adaptive Kalman Filtering and Multiple Kernels Tracking with Projected Gradients,” ACM/IEEE Int'l Conf. on Distributed Smart Cameras (ICDSC 2011), Ghent Belgium, August 22-25, 2011.
170. Chun-Te Chu, Jenq-Neng Hwang, Kung-Ming Lan and Shen-Zheng Wang “ Tracking Across Multiple Cameras with Overlapping Views Based on Brightness and Tangent Transfer Functions ,” ACM/IEEE Int'l Conf. on Distributed Smart Cameras (ICDSC 2011), Ghent Belgium, August 22-25, 2011.
171. Meng-Che Chuang, Jenq-Neng Hwang, Kresimir Williams, Richard Towler “ Automatic Fish Segmentation via Double Local Thresholding for Trawl-Based Underwater Camera Systems,” The IEEE Int'l Conf. on Image Processing (ICIP 2011), Brussel Belgium, Sept 11-14, 2011.
172. Victor Gau, Jenq-Neng Hwang, Kung-Ming Lan, Hung-I Pai, Yi-Yuan Chen “ Latency Minimized Probabilistic CSMA/CA ,” The 7th ACM* Workshop on Wireless Multimedia Networking and Computing, October 31 - November 4, 2011, Miami, FLorida, USA.
173. Su-Kai Li, Jen-Shun Yangy, Ching-Te Chiu, Po-Ting Yeh and Jenq-Neng Hwang “ Handover Delay Reduction and Buffer-Based Data Recovery Scheme for Inter

Multicast Broadcast Service Zone ," The IEEE Global Communication Conference (Globecom 2011), Houston Texas,USA, Dec. 5-9, 2011.

174. Hoang Le Uyen Thuc, Shian-Ru Ke, Jenq-Neng Hwang,Jang-Hee Yoo, Kyoung Ho Choi " Human Action Recognition based on 3D Body Modeling from Monocular Videos," 2012 Frontier of Computer Vision Workshop, Kawasaki, Japan, Feb. 2-4, 2012.
175. Hoang Le Uyen Thuc, Pham Van Tuan, and Jenq-Neng Hwang " An Effective 3D Geometric Relational Feature Descriptor for Human Action Recognition ," 2012 IEEE RIVF International Conference on Computing & Communication Technologies, Research, Innovation, and Vision for the Future (RIVF), Ho Chi Minh City, Vietnam, Feb.27 - March 1, 2012.
176. Chun-Te Chu, Jenq-Neng Hwang, Yi-Yuan Chen, Shen-Zheng Wang " Camera Link MOdel Estimation in A Distributed Camera Network based on the Deterministic Annealing and Barrier Method ," IEEE Int'l Conf. on ASSP, Kyoto Japan, March 25-30, 2012.
177. Po-Han Wu, Jenq-Neng Hwang, Jae-Young Pyun, Kung-Ming Lan, and Jian-Ren Chen " QoE-Aware Resource Allocation for Integrated Mobile Surveillance System Over 4G Networks," IEEE Int'l Symposium on Circuits and Systems, Seoul Korea, May 20-23, 2012.
178. Shian-Ru Ke, Jenq-Neng Hwang, Maryam Fazel, Shen-Zheng Wang, Hung-I Pai " Constrained Multiple Kernel Tracking for Human Limbs," IEEE Int'l Symposium on Circuits and Systems, Seoul Korea, May 20-23, 2012.
179. Hoang Le Uyen Thuc, Shian-Ru Ke, Jenq-Neng Hwang, Pham Van Tuan,Truong Ngoc Chau, " Quasi-Periodic Action Recognition from Monocular Videos via 3D Human Models and Cyclic HMMs," IEEE International Conference on Advanced Technologies for Communications (ATC 2012), Hanoi Vietnam, Oct 10-12, 2012.
180. Chun-Te Chu, Jenq-Neng Hwang, Kual-Zheng Lee, Jen-Yu Yu, " Tracking Across Nonoverlapping Cameras Based On The Unsupervised Learning Of Camera Link Models," 6th ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 2012), Hong Kong, Oct 30-Nov 2, 2012.
181. Kuan Hui Lee, Jenq-Neng Hwang, Jang-Hee Yoo, KyoungHo Choi " Effective Car Video Retrieval Using Feature Matching in a Mobile Video Cloud," 6th ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 2012), Hong Kong, Oct 30-Nov 2, 2012.
182. Bilge Soran, Jenq-Neng Hwang, Su-In Lee, Linda Shapiro, " Tremor Detection Using Motion Filtering and SVM," 21st International Conference on Pattern Recognition (ICPR 2012), Tsukuba Science City, Japan, Nov 11-15, 2012.
183. Xiang Chen Jenq-Neng Hwang, Po-Han Wu, Hsuan-Jung Su " Adaptive Mode and Modulation Coding Switching Scheme in MIMO Multicasting System," IEEE Int'l Symposium on Circuits and Systems, Beijing China, May 19-23, 2013.
184. Meng-Che Chuang, Jenq-Neng Hwang, Kresimir Williams, Richard Towler " Multiple Fish Tracking via Viterbi Data Association for Low-Frame-Rate Underwater Camera Systems," IEEE Int'l Symposium on Circuits and Systems, Beijing China, May 19-23, 2013.
185. Kuan-Hui Lee, Jenq-Neng Hwang, Jen-Yu Yu, Kual-Zheng Lee " Vehicle Tracking Iterative by Kalman-based Constrained Multiple-Kernel and 3-D Model-based Localization," IEEE Int'l Symposium on Circuits and Systems, Beijing China, May 19-23, 2013.
186. Meng-Che Chuang, Jenq-Neng Hwang, Craig S. Rose " Aggregated Segmentation of Fish from Conveyor Belt Videos," IEEE Int'l Conf. on Acoustics, Speech and Signal Processing (ICASSP), Vancouver Canada, May 26-31, 2013.
187. Chun-Te Chu, Kuan-Hui Lee, Jenq-Neng Hwang " Self-Organized and Scalable Camera Networks for Systematic Human Tracking across Nonoverlapping Cameras," IEEE Int'l Conf. on Acoustics, Speech and Signal Processing (ICASSP), Vancouver Canada, May 26-31, 2013.

188. Kuan-Hui Lee, Yong-Jin Lee, Jenq-Neng Hwang " Multiple-Kernel based Vehicle Tracking Using 3-D Deformable Model and License Plate Self-Similarity'," IEEE Int'l Conf. on Acoustics, Speech and Signal Processing (ICASSP), Vancouver Canada, May 26-31, 2013.
189. Xiang Chen, Jenq-Neng Hwang, Chungnan Lee, Chih-Wei Huang, Xiaoqing Yu, Juan Zhang, " An Efficient CQI Feedback Resource Allocation Scheme for Wireless Video Multicast Services," IEEE IEEE Global Communications (GlobeCom) Conference 2013, Atlanta, GA, USA, Dec. 9-13, 2013.
190. Xiang Chen, Jenq-Neng Hwang, Chiung-Ying Wang, Chungnan Lee, " A Near Optimal QoE-Driven Power Allocation Scheme for SVC-Based Video Transmissions Over MIMO Systems," IEEE International COnference on Communication (ICC) 2014, Syndey, Australia, June 10-14, 2014.
191. Yu-Chi Chen, Chun-Te Chu, Jenq-Neng Hwang, Jang-Hee Yoo, " A Privacy-Preserving Huamn Tracking Scheme in Centralized Cloud based Camera Networks," IEEE International COnference on Communication (ICC) 2014, Syndey, Australia, June 10-14, 2014.
192. Xiaoqing Yu, Huanhuan Liu, Jianhua Shi, Jenq-Neng Hwang, Wanggen Wan, Jing Lu, "Association Rule Mining of Personal Hobbies in Social Networks," IEEE BigData 2014, Taipei, Taiwan, May 28-30, 2014.
193. Xiang Chen, Jenq-Neng Hwang, Chiung-Ying Wang, Chungnan Lee, " A Near Optimal QoE-Driven Power Allocation Scheme for SVC-Based Video Transmissions Over MIMO Systems," IEEE International COnference on Communication (ICC) 2014, Syndey, Australia, June 10-14, 2014.
194. Yu-Chi Chen, Chun-Te Chu, Jenq-Neng Hwang, Jang-Hee Yoo, " A Privacy-Preserving Huamn Tracking Scheme in Centralized Cloud based Camera Networks," IEEE International COnference on Communication (ICC) 2014, Syndey, Australia, June 10-14, 2014.
195. Meng-Che Chuang, Jenq-Neng Hwang, Kresimir Williams, " Supervised and Unsupervised Feature Extraction Methods for Underwater Fish Species Recognition," ICPR workshop on Computer Vision for Analysis of Underwater Imagery (CVAUI), Stockholm, Sweden, August 24, 2014.
196. Kuan-Hui Lee, Jenq-Neng Hwang, Jim Pitton, Greg Okopal, " Driving Recorder Based On-Road Pedestrian Tracking Using Visual SLAM and Constrained Multiple-Kernel," 17th International IEEE Conference on Intelligent Transportation Systems (ITSC2014), Qingdao, China, Oct. 8-11, 2014.
197. Meng-Che Chuang, Jenq-Neng Hwang, Fang-Fei Kuo, Man-Kwan Shan, Kresimir Williams, " Recognizing Live Fish Species by Hierarchical Partial Classification based on the Exponential Benefit," IEEE International COnference on Image Processing (ICIP) 2014, Paris, France, Oct. 27-30, 2014.
198. Yi-Ben Chen, Shun-Ren Yang, Jenq-Neng Hwang, Ming-Zoo Wu, " An Energy-Efficient Scheduling Algorithm for Real-Time Machine-to-Machine (M2M) Data Reporting," IEEE Global Communications (GlobeCom) Conference 2014, Austin, Tx, USA, Dec. 8-12, 2014.
199. Li Hou, Wanggen Wan, Kuan-Hui Lee, Jenq-Neng Hwang, Greg Okapal, James Pitton " 'Deformable Multiple-Kernel based Human Tracking Using A Moving Camera," IEEE International Conf. on Acoustics, Speech and Signal Processing (ICASSP'15), Brisbane, Australia, April 19-24, 2015.
200. Young-Gun Lee, Jenq-Neng Hwang, Zhijun Fang " Combined Estimation of Camera Link Models for Human Tracking Across Nonoverlapping Cameras," IEEE International Conf. on Acoustics, Speech and Signal Processing (ICASSP'15), Brisbane, Australia, April 19-24, 2015.
201. Xiang Chen, Haiqing Du, Jenq-Neng Hwang, James A. Ritcey, Chung-Nan Lee, " A QoE-Driven FEC Rate Adaptation Scheme for Scalable Video Transmissions Over MIMO Systems ," IEEE International Conference on Communication (ICC) 2015, London UK, June 8-12, 2015.

202. Xiang Chen, Jenq-Neng Hwang, Cheng-Ju Wu, Shun-Ren Yang, Chung-Nan Lee, " A QoE-Based Application Layer Scheduling Scheme for Real Time Scalable Video Transmissions over Multi-RAT Systems," IEEE International Conference on Communication (ICC) 2015, London UK, June 8-12, 2015.
203. Shen-Chi Chen, Young-Gun Lee, Jenq-Neng Hwang, Yi-Ping Hung, Jang-Hee Yoo, "An Ensemble of Invariant Features for Person Re-identification," IEEE International Workshop on Multimedia Signal Processing (MMSP) 2015, Xiamen, China, Oct. 19-21, 2015.
204. Xiang Chen, Jenq-Neng Hwang, Kuan-Hui Lee, Ricardo L. de Queiroz, "Quality-of-Content (QoC)-Driven Rate Allocation for Video Analysis in Mobile Surveillance Networks," IEEE International Workshop on Multimedia Signal Processing (MMSP) 2015, Xiamen, China, Oct. 19-21, 2015.
205. Jounsup Park, Xiang Chen, Jenq-Neng Hwang, "Optimal Power Allocation and Rate Adaptation for Scalable Video over Multi-User MIMO," IEEE Int'l Conf. on Globecom, San Diego, December 2015.
206. Zheng Tang, Jenq-Neng Hwang, Yen-Shuo Lin, Jen-Hui Chuang " Multiple-Kernel Adaptive Segmentation and Tracking (MAST) for Robust Object Tracking," IEEE Int'l Conference on Acoustics, Speech and Signal Processing (ICASSP), Shanghai, China, March 20-25, 2016.
207. Tsung-Wei Huang, Jenq-Neng Hwang, Craig Rose " Chute-based Automated fish Length Measurement and Water Drop Detection," IEEE Int'l Conference on Acoustics, Speech and Signal Processing (ICASSP), Shanghai, China, March 20-25, 2016.
208. Yen-Shuo Lin, Hua-Tsung Chen, Jenq-Neng Hwang, Ching-Ju Hsiao and Jen-Hui Chuang, "1-D Integral Image for Enhancing Efficiency and Effectiveness of Probabilistic Occupancy Map-Based People Localization Approach," (one of the selected Excellent Papers), The 8th International Conference on Digital Image Processing (ICDIP), Chengdu, China, May 20-23, 2016.
209. Zheng Tang, Yen-Shuo Lin, Kuan-Hui Lee, J.-N. Hwang, Jen-Hui Chuang, Zhijun Fang, "Camera Self-Calibration from Tracking of Moving Persons," 23rd Int'l Conference on Pattern Recognition (ICPR), Cancun, Mexico, Dec. 4-8, 2016.
210. Tsung-Wei Huang, Jenq-Neng Hwang, Suzanne Romain, Farron Wallace, " Live Tracking of Rail-Based Fish Catching onin Wild Sea Surface," Computer Vision for Analysis of Underwater Imagery (CVAUI), IEEE 23rd International Conference on Pattern Recognition, Cancun, Mexico, 4-8 December, 2016.
211. Gaoang Wang, Jenq-Neng Hwang, Kresimir Williams, Craig Rose, Farron Wallace, " Shrinking Encoding with Two Level Codebook Learning for Fine-grained Fish Recognition," Computer Vision for Analysis of Underwater Imagery (CVAUI), IEEE 23rd International Conference on Pattern Recognition, Cancun, Mexico, 4-8 December, 2016.
212. Gaoang Wang, Jenq-Neng Hwang, Kresimir Williams, George Carter, " Closed-Loop Tracking-by-Detection for ROV-Based Multiple Fish Tracking," Computer Vision for Analysis of Underwater Imagery (CVAUI), IEEE 23rd International Conference on Pattern Recognition, Cancun, Mexico, 4-8 December, 2016
213. Jounsup Park, Aliasghar Tarkhan, Jenq-Neng Hwang, Qiyue Li, Wei Huang, Yiling Xu, " Optimal DASH-Multicasting over LTE," IEEE Int'l Conf. on Communications (ICC), Paris, France, May 21-25, 2017.
214. Tsung-Wei Huang, Sheng-Ting Shen, Jenq-Neng Hwang, Suzanne Romain, Farron Wallace, "Tracking and Measurement of Catch Events in Stereo Video for Longline Fisheries," Symposium on Emerging Technologies in Fisheries-Dependent Science and Catch Monitoring, 147th Annual Meeting of the American Fisheries Society Meeting, Tampa, Florida, August 18-24, 2017.
215. Gaoang Wang, Jenq-Neng Hwang, Craig Rose, Farron Wallace, "Query Learning for Fish Identification based on Uncertainty Measure and Diversity Constraint," Symposium on Emerging Technologies in Fisheries-Dependent Science and

Catch Monitoring, 147th Annual Meeting of the American Fisheries Society Meeting, Tampa, Florida, August 18-24, 2017.

216. Younggun Lee, Zheng Tang, Jenq-Neng Hwang, Zhijun Fang, “Inter-Camera Tracking based on Fully Unsupervised Learning,” IEEE Int'l Conf. on Image Processing (ICIP), Beijing, China, September 17-20, 2017.
217. Gaoang Wang, Jenq-Neng Hwang, Craig Rose, Farron Wallace, “ Uncertainty Sampling Based Active Learning with Diversity Constraint by Sparse Selection,” 2017 IEEE Workshop on Multimedia Signal Processing, London-Luton, UK, October 16-18, 2017.
218. Tao Liu, Yong Liu, Zheng Tang, Jenq-Neng Hwang, “ Adaptive Ground Plane Estimation for Moving Camera-Based 3D Object Tracking,” 2017 IEEE Workshop on Multimedia Signal Processing, London-Luton, UK, October 16-18, 2017.
219. Li Chen , Jie Sun , Niranjan Balu , Thomas Hatsukami , Mahmud Mossa-Basha , Kristi D. Pimentel , Jenq-Neng Hwang , and Chun Yuan, “ Automated detection and labeling of the intracranial arterial tree in routine MR angiography: A machine learning approach enhanced with structural saliency,” RSNA 103rd Scientific Assembly and Annual Meeting, Chicago, Illinois, November 26 – December 1, 2017.
220. Qiuyu Chen, Ryoma Bise, Lin Gu, Yinqiang Zheng, Imari Sato, Jenq-Neng Hwang, Nobuaki Imanishi and Sadakazu Aiso, “ Virtual Blood Vessels in Complex Background using Stereo X-ray Images,” BioImage Computing (BIC) Workshop, ICCV 2017, Venice Italy, October 23, 2017.
221. Li Chen, Yanjun Xie, Jie Sun, Niranjan Balu, Mahmud Mossa-Basha, Kristi Pimentel, Thomas Hatsukami, Jenq-Neng Hwang, and Chun Yuan, “ 3D intracranial artery segmentation using a convolutional autoencoder ” IEEE International Conference on Bioinformatics and Biomedicine Kansas City, MO, USA, November 13 - 16, 2017
222. Wei Huang, De Meng, Jenq-Neng Hwang, Jounsup Park, Yiling Xu, Wenjun Zhang, “QoE Based SDN Heterogeneous LTE and WLAN Multi-Radio Networks for Multi-User Access,” IEEE Wireless Communications and Networking Conference (WCNC), Barcelona, Spain, April 15-18, 2018
223. Younggun Lee and Jenq-Neng Hwang, “Facial Feature-Integrated Inter-Camera Human Tracking,” IEEE Int'l Conf. on Acoustics, Speech and Signal Processing (ICASSP), Calgary, Alberta, Canada, April 15-20, 2018
224. Zheng Tang, Gaoang Wang, Hao Xiao, Aotian Zheng, Jenq-Neng Hwang, “Single-camera and inter-camera vehicle tracking and 3D speed estimation based on fusion of visual and semantic features,” 2018 IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRW), Salt Lake City, June 18-22, 2018
225. Zheng Tang, Renshu Gu, Jenq-Neng Hwang, “Joint Multi-View People Tracking and Pose Estimation for 3D Scene Reconstruction,” IEEE International Conference on Multimedia and Expo (ICME), San Diego, July 23-27, 2018
226. Na Wang, Haiqing Du, Yong Liu, Zheng Tang, Jenq-Neng Hwang, “Self-Calibration of Traffic Surveillance Cameras based on moving vehicle appearance and 3-D Vehicle Modeling,” IEEE International Conference on Image Processing (ICIP), Athens Greece, Oct 7-10, 2018.
227. Yunfei Chu, Chunyan Feng, Caili Guo, Yaqing Wang, and Jenq-Neng Hwang, "Event2vec: Heterogeneous Hypergraph Embedding for Event Data," Int'l Conf. on Data Mining (ICDM), Large Scale Graph Representation Learning and Applications (GRLA) Workshop, Singapore, Nov. 17-20, 2018.
228. Gaoang Wang, Jenq-Neng Hwang, Yiling Xu, Farron Wallace, Craig Rose, "Coarse-to-Fine Segmentation Refinement and Missing Shape Recovery for Halibut Fish,” IEEE Global Conference on Signal and Information Processing (GlobalSIP), Anaheim California, Nov 26-29, 2018

229. Jounsup Park, Jenq-Neng Hwang, Hung-Yu Wei "Cross-Layer Optimization for VR Video Multicast Systems," IEEE Global Communications (Globecom) 2018, Abu Dhabi, UAE, December 9-13, 2018.
230. Jounsup Park, Jenq-Neng Hwang, Phil Chou "Volumetric Media Streaming for Augmented Reality," IEEE Global Communications (Globecom) 2018, Abu Dhabi, UAE, December 9-13, 2018.
231. Yaqing Wang, Chunyan Feng, Caili Guo, Yunfei Chu and Jenq-Neng Hwang "Solving the Sparsity Problem in Recommendations via Cross-Domain Item Embedding Based on Co-clustering," 12th ACM International Conf. on Web Search and Data Mining (WSDM), Melbourne, Australia, Feb. 11-15, 2019.
232. Renshu Gu, Gaoang Wang and Jenq-Neng Hwang "Efficient Multi-Person Hierarchical 3D Pose Estimation for Autonomous Driving," IEEE Multimedia Information Processing and Retrieval (MIPR 2019), San Jose, California, March 28-30, 2019.
233. Zheng Tang, Milind Naphade, Ming-Yu Liu, Xiaodong Yang, Stan Birchfield, Shuo Wang, Ratnesh Kumar, David Anastasiu, Jenq-Neng Hwang, "CityFlow: ACity-Scale Benchmark for Multi-Target Multi-Camera Vehicle Tracking and Re-Identification," IEEE/CVF Computer Vision and Pattern Recognition (CVPR) Conference, Long Beach, California, June 16-20, 2019.
234. Hung-Min Hsu, Tsung-Wei Huang, Gaoang Wang, Jiarui Cai, Zhichao Lei, and Jenq-Neng Hwang, "Multi-Camera Tracking of Vehicles based on Deep Features Re-ID and Trajectory-Based Camera Link Models," AI City Challenge Workshop, IEEE/CVF Computer Vision and Pattern Recognition (CVPR) Conference, Long Beach, California, June 16-20, 2019.
235. Tsung-Wei Huang, Jiarui Cai, Hao Yang, Hung-Min Hsu, and Jenq-Neng Hwang, "Multi-View Vehicle Re-Identification using Temporal Attention Model and Metadata Re-Ranking," AI City Challenge Workshop, IEEE/CVF Computer Vision and Pattern Recognition (CVPR) Conference, Long Beach, California, June 16-20, 2019.
236. Gaoang Wang, Xinyu Yuan, Aotian Zhang, Hung-Min Hsu, and Jenq-Neng Hwang, "Anomaly Candidate Identification and Starting Time Estimation of Vehicles from Traffic Videos," AI City Challenge Workshop, IEEE/CVF Computer Vision and Pattern Recognition (CVPR) Conference, Long Beach, California, June 16-20, 2019.
237. Anjie Wang, Yongbin Gao, Zhijun Fang, Xiaoyan Jiang, Shanshe Wang, Siwei Ma, Jenq-Neng Hwang, "Unsupervised Learning of Depth and Ego-Motion with Spatial-Temporal Geometric Constraints," IEEE International Conference on Multimedia and Expo (ICME), July 2019
238. Yanting Zhang, Jie Yang, Haotian Zhang, Jenq-Neng Hwang, "Bundle Adjustment for Monocular Visual Odometry based on Detected Traffic Sign Features, " IEEE International Conference on Image Processing (ICIP), Taipei, Taiwan, September 22-25, 2019
239. Tsung-Wei Huang, Jenq-Neng Hwang, Suzanne Romain, Farron Wallace, " Recognizing Fish Species Captured Live on Wild Sea Surface in Videos by Deep Metric Learning with A Temporal Constraint, " IEEE International Conference on Image Processing (ICIP), Taipei, Taiwan, September 22-25, 2019
240. Gaoang Wang, Yizhou Wang, Haotian Zhang, Renshu Gu, Jenq-Neng Hwang, " Exploit the Connectivity: Multi-Object Tracking with TrackletNet , " ACM Multimedia Conference (ACMMM), Nice, France, October 21-25, 2019
241. Yizhou Wang, Yen-Ting Huang, Jenq-Neng Hwang, " Monocular Visual Object 3D Localization in Road Scenes , " ACM Multimedia Conference (ACMMM), Nice, France, October 21-25, 2019
242. Haotian Zhang, Gaoang Wang, Zhichao Lei, Jenq-Neng Hwang, " Eye in the Sky: Drone-Based Object Tracking and 3D Localization , " ACM Multimedia Conference (ACMMM), Nice, France, October 21-25, 2019

243. Jiarui Cai, Yizhou Wang, Haotian Zhang, Hung-Min Hsu, Chengqian Ma, Jenq-Neng Hwang, "IA-MOT: Instance-Aware Multi-Object Tracking with Motion Consistency," 5th BMTT MOTChallenge Workshop in CVPR 2020: Multi-Object Tracking and Segmentation, June 19, 2020, Seattle, WA, USA
244. Haotian Zhang, Yizhou Wang, Jiarui Cai, Hung-Min Hsu, Haorui Ji, Jenq-Neng Hwang, "LIFTS: Lidar and Monocular Image Fusion for Multi-Object Tracking and Segmentation," 5th BMTT MOTChallenge Workshop in CVPR 2020: Multi-Object Tracking and Segmentation, June 19, 2020, Seattle, WA, USA
245.
246. Li Chen, Duygu Baylam Geleri, Jie Sun, Hiroko Watase, Jiarui Cai, Yin Guo, Niranjan Balu, Dongxiang Xu, Thomas Hatsukami, Yongjun Wang, Jenq-Neng Hwang, and Chun Yuan, "Multi-planar, multi-contrast and multi-timepoint analysis tool (MOCHA) for intracranial vessel wall imaging review," International Society for Magnetic Resonance in Medicine (ISMRM) annual meeting, Paris, August 2020
247. Yanting Zhang, Yonggang Qi, Jie Yang, Jenq-Neng Hwang, "Improved Traffic Sign Detection in Videos through Reasoning Effective RoI Proposals," IEEE International Conf. on Multimedia Expo (ICME), London UK, July 2020
248. *Chia-Chi Tsai, Yong-Hsiang Yang, Hung-Wei Lin, Bo-Xun Wu, En Chih Chang, Hung Yu Liu, Jhih-Sheng Lai, Po Yuan Chen, Jia-Jheng Lin, Jen Shuo Chang, Li-Jen Wang, Ted T. Kuo, Jenq-Neng Hwang, and Jiun-In Guo, "*The 2020 Embedded Deep Learning Object Detection Model Compression Competition for Traffic in Asian Countries," IEEE International Conf. on Multimedia Expo (ICME), London UK, July 2020
249. Li Chen, Jenq-Neng Hwang, Thomas Hatsukami, and Chun Yuan, "Automated Intracranial Artery Labeling using a Graph Neural Network and Hierarchical Refinement," the 23rd International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), October 4-8, Lima Peru.

Ph.D. SUPERVISION

Graduated Ph.D. Students

1) Shyh-Rong Lay, "Projection Pursuit Learning for Regression, Classification and Density Estimation - A Neural Network Perspective," March 1994.

2) Yenhao Tseng, "A Neural Network Technique for Invariant Recognition and Motion Estimation of Three-Dimensional Objects Using Range Data," March 1995.

3) Seokyoung Moon, "Robust Speech Recognition via Inversion of Hidden Markov Models," March 1995.

4) Daniel T. Davis, "Solving Inverse Problems Using Bayesian Modeling to Incorporate Information Sources," June 1995.

5) Greg. I. Chiou, ";Active Contour Models for Distinct Contour Tracking and Lipreading," September 1995.

6) Shih-Shien You, "The Growing and Pruning of Neural Network Learning: An Optimization Perspective," (joint advising with Prof. Wen-Wei Lin of National Tsinghua University, Taiwan) March 1996.

7) Chein-Jen Wang, “Joint Model- and Feature-Space Adaptation Techniques for Continuous Robust Speech Recognition,” March 1997.

8) Tzong-Der Wu, “Dynamic Bit-Rate Conversion and Re-Allocation in Multipoint Video Transcoding,” May 1999.

9) Eugene Lin, “Fuzzy Reasoning of Three Dimensional Snake Tracking of Medical Images,” November 1999.

10) Sachin Deshpande, “Systems for Interactive Multimedia Distance Learning,” November 1999.

11) Rosas-Romero Roberto, “Morphing and Motion Tracking of 3-D Objects,” December 1999.

12) Wu-hsiang Jonas Chen, “Error Resilient and Concealment Video Coding,” December 2000.

13) ChangIck Kim, “Framework for Video Object Segmentation and Abstraction,” December 2000.

14) Dongxiang Xu, “Markov Random Field based Contour Segmentation for MR Image Sequences,” April 2001.

15) Tony Nguyen, “Human Perception Based Dynamic Frame Selection in Time Lapsed Video,” March 2002.

16) Sanpachai Huvanandana, “Biometric Signal Classification: An Enhanced Fingerprint Identification System," April 2002.

17) Kyoung-Ho Choi , “Framework for 3-D Audio to Visual Conversion in MPEG-4,” June 2002.

18) Serchen Chang, “;A Novel Rate Predictor and its Rate Control for Video Coding,” (joint advising with Prof. Jar-Ferr Yang of National Cheng-Kung University, Taiwan) May 2003.

19) Qiang Liu, “Available Bandwidth Estimation and Rate-Based Congestion Control in Multimedia Communication,” May 2004

20) Ying Luo, “Statistical Semantic Analysis of Spatio-Temporal Image Sequences,” Oct. 2004.

21) Hsu-Feng Hsiao, “Multimedia Streaming Congestion Control over Heterogeneous Networks: From Distributed Computation to End-to-End Perspective,” June 2005.

22) Hsu-Yung Cheng, “Multi-Object Tracking via Particle Sampling and Enhanced Probabilistic Data Association for Event Detection in Intelligent Video Systems,” June 2008.

23) Chih-Wei Gary Huang, “Cross-Layer Resource Management for Multimedia over Wireless Networks,” June 2009.

24) Victor Gau, “Throughput Maximization and Latency Minimization in Dense Wireless Ad Hoc Networks,” June 2010.

25) Ibrahim Karliga, “A Framework for Human Body Video Object Segmentation and Body Parts Tracking,” March 2011.

26) Chun-Te Chu, "Robust and Consistent Human Tracking within Camera and Across Multiple Cameras, " June 2013

27) Shian-Ru Ke, “Recognition of Human Actions based on 3D Pose Estimation via Monocular Video Sequences,” March 2014.

28) Po-Han Wu, " Visual-Quality-Driven Video Networking over 4G Wireless Broadband, " May 2014.

29) Meng-Che David Chuang, " Automatic Video Analysis for Fishery Survey Systems, " June 2015.

30) Kuan-Hui Lee, "On-Road Pedestrian Tracking across Multiple Driving Recorders,” December 2015.

31) Xiang Chen, " Scalable Video Networking over MIMO and Multi-RAT Systems," December 2015.

32) Younggun Lee, “Robust Video Object Tracking in Distributed Camera Network,” December 2017.

33) Jounsup Park, "Cross-Layer Optimization of Wireless Video Multicast Systems " June 2018

34) Zheng Tang, “Robust Video Object Tracking via Camera Self-Calibration,” June 2019

35) Gaoang Wang, “Vision based Analysis in Fishery Applications,” June 2019

36) Tsung-Wei Huang, “Automatic Video Analysis for Electronic Monitoring of Fishery Activities,” September 2019

37) Renshu Gu, "Towards Multi-Person 3D Pose Estimation in Natural Videos," June 2020.