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C.-C. Wang, C.-W. Tung, I-Shou Univ. (Taiwan); J.-Y. Kao, Industrial Technology Research Institute (Taiwan)

Residue sampling for image and video compression [5960-2]
W.-S. Kim, H. M. Kim, Samsung Advanced Institute of Technology (South Korea)

Efficient variable block size motion estimation for H.264 based on motion distribution likelihood [5960-3]
T.-Y. Kuo, C.-H. Chan, H.-B. Chen, National Taipei Univ. of Technology (Taiwan)

A motion compensation technique using sliced blocks and its application to hybrid video coding [5960-4]
S. Kondo, H. Sasai, Matsushita Electric Industrial Co., Ltd. (Japan)

A new approach to compatible adaptive block-size transforms [5960-5]
J. Dong, J. Lou, C.-X. Zhang, L. Yu, Zhejiang Univ. (China)

Dual-path block size decision for fast motion search in H.264/AVC [5960-6]
T. Shimizu, A. Yoneyama, Y. Takishima, KDDI R&D Labs. Inc. (Japan)

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Multiple constraints-based QoS multicast routing: model and algorithms [5960-7]
H. Chen, B. Sun, Wuhan Univ. of Science and Engineering (China)

Efficient loss recovery in application overlay stored media streaming [5960-8]
Z. Xie, G. Zheng, G. He, Wuhan Univ. (China)

Improved H.264/AVC video broadcast/multicast [5960-9]
D. Tian, V. Kumar MV, Tampere International Ctr. for Signal Processing (Finland); M. Hannuksela, S. Wenger, Nokia Research Ctr. (Finland); M. Gabbouj, Tampere Univ. of Technology (Finland)

H.26x-based overlay video multicast system over the Internet [5960-10]
H. Song, POSTECH (South Korea); H. Kang, Hongik Univ. (South Korea)

Segment tree based control plane protocol for peer-to-peer on-demand streaming service discovery [5960-11]
C. Zheng, Shanghai Jiaotong Univ. (China); G. Shen, S. Li, Microsoft Research Asia (China)

A workload adaptive scheme for zero-delay video-on-demand service [5960-12]
Y. Liu, S. Yu, X. Wang, Shanghai Jiaotong Univ. (China)

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Model based segmentation of motion fields in compressed video sequences using partition projection and relaxation [5960-13]
S. Treetasanatavorn, Univ. of Erlangen-Nuremberg (Germany); U. Rauschenbach, J. Heuer, Siemens AG (Germany); A. Kaup, Univ. of Erlangen-Nuremberg (Germany)

Human silhouette matching based on moment invariants [5960-14]
Y.-C. Sun, Shenyang Institute of Computing Technology, Chinese Academy of Sciences (China) and Graduate School, Chinese Academy of Sciences (China); X.-J. Qiu, Institute of Computing Technology, Chinese Academy of Sciences (China) and Graduate School, Chinese Academy of Sciences (China); S.-H. Xia, Z.-Q.Wang, Institute of Computing Technology, Chinese Academy of Sciences (China)

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N. Ikoma, T. Uchino, H. Maeda, Kyushu Institute of Technology (Japan)

Moving vehicles segmentation based on Gaussian motion model [5960-16]
W. Zhang, X. Z. Fang, W. Y. Lin, Shanghai Jiao Tong Univ. (China)
Multi-information fusion for human motion tracking by particle filter [5960-17]
M. Du, L. Guan, Ryerson Univ. (Canada)

Automatic extraction of initial moving object based on advanced feature and video analysis [5960-18]
M.-Y. Liu, Q.-H. Dai, X.-D. Liu, G.-H. Er, Tsinghua Univ. (China)

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D. Maestroni, M. Tagliasacchi, S. Tubaro, Politecnico di Milano (Italy)

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T. Ishida, S. Muramatsu, Niigata Univ. (Japan); D. Kitagawa, Kodak Digital Product Ctr. Japan Ltd. (Japan); J. Uchita, Fujitsu LSI Solution Ltd. (Japan); M. Hiki, H. Kikuchi, Niigata Univ. (Japan)

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R. Xiong, Institute of Computing Technology, Chinese Academy of Sciences (China); J. Xu, F. Wu, S. Li, Microsoft Research Asia (China)

Three-dimensional subband scalable video coding embedded with H.264/AVC codec [5960-22]
X. Ji, Institute of Computing Technology, Chinese Academy of Sciences (China); J. Xu, Microsoft Research Asia (China); D. Zhao, Institute of Computing Technology, Chinese Academy of Sciences (China); F. Wu, Microsoft Research Asia (China)

Overcomplete MCTF for improved spatial scalability in 3D wavelet video compression [5960-23]
T. Rusert, J.-R. Ohm, RWTH Aachen Univ. (Germany)

Spatially scalable video coding with in-band prediction [5960-24]
X. Jin, HUST (China); X. Sun, F. Wu, Microsoft Research Asia (China); G. Zhu, HUST (China)

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An efficient video shot representation for fast video retrieval [5960-25]
C. Cai, The Hong Kong Polytechnic Univ. (China) and Xi'an Jiaotong Univ. (China); K.-M. Lam, The Hong Kong Polytechnic Univ. (China); Z. Tan, Xi'an Jiaotong Univ. (China)

Fast coarse-to-fine video retrieval via shot-level statistics [5960-26]
Y.-H. Ho, C.-W. Lin, National Chung Cheng Univ. (Taiwan); J.-F. Chen, H.-Y. M. Liao, Institute of Information Science, Academia Sinica (Taiwan)

Semi-automatic video semantic annotation based on active learning [5960-27]
Y. Song, Univ. of Science and Technology of China (China); X.-S. Hua, Microsoft Research Asia (China); L.-R. Dai, R.-H. Wang, Univ. of Science and Technology of China (China)

A scheme for racquet sports video analysis with the combination of audio-visual information [5960-28]
L. Xing, Graduate School, Chinese Academy of Sciences (China); Q. Ye, Institute of Computing Technology, Chinese Academy of Sciences (China); W. Zhang, Harbin Institute of Technology (China); Q. Huang, H. Yu, Graduate School, Chinese Academy of Sciences (China)

To mine capture intention of camcorder users [5960-29]
T. Mei, X.-S. Hua, Microsoft Research Asia (China); H.-Q. Zhou, Univ. of Science and Technology of China (China); S. Li, Microsoft Research Asia (China)

Highlight detection for video content analysis through double filters [5960-30]
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X. Liang, K. Kotani, T. Asano, Japan Advanced Institute of Science and Technology (Japan)

High performance, cost effective generalized filter architecture for image noise removal, image enhancement and edge detection [5960-32]
J. Jain, Metta Semiconductor Private Ltd. (India); A. K. Mishra, STMicroelectronics Private Ltd. (India)
Composite video artifact removal by nonlinear bilateral filtering [5960-33]
S. Kim, K. Hong, Samsung Electronics Co., Ltd. (South Korea)

Wavelet-based Bayesian denoising using Bernoulli-Gaussian mixture model [5960-34]
I. K. Eom, Miryang National Univ. (South Korea); Y. S. Kim, Pusan National Univ. (South Korea)

Directional filtering for block recovery using wavelet features [5960-35]
S. H. Hyun, Pusan National Univ. (South Korea); I. K. Eom, Miryang National Univ. (South Korea); Y. S. Kim, Pusan National Univ. (South Korea)

Image denoising using grey relational analysis in spatial domain [5960-36]
M. Ma, Northwestern Polytechnical Univ. (China); H. Tian, Xi'an Univ. of Science and Technology (China); C. Hao, Northwestern Polytechnical Univ. (China)

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MCTF and scalability extension of H.264/AVC and its application to video transmission, storage, and surveillance [5960-37]
R. Schäfer, H. Schwarz, D. Marpe, T. Schierl, T. Wiegand, Fraunhofer Institute for Telecommunications – Heinrich Hertz Institute (Germany)

Mode-based temporal filtering for in-band wavelet video coding with spatial scalability [5960-38]
D. Zhang, Shanghai Jiao Tong Univ. (China); J. Xu, F. Wu, Microsoft Research Asia (China); W. Zhang, H. Xiong, Shanghai Jiao Tong Univ. (China)

A low complexity prioritized bit-plane coding for SNR scalability in MPEG-21 scalable video coding [5960-39]
W.-H. Peng, T. Chiang, H.-M. Hang, National Chiao-Tung Univ. (Taiwan)

Customer oriented SNR scalability scheme for scalable video coding [5960-40]
Z. G. Li, S. Rahardja, Institute for Infocomm Research (Singapore)

Optimal subband rate allocation for spatial scalability in 3D wavelet video coding with motion aligned temporal filtering [5960-41]
R. Xiong, J. Xu, F. Wu, S. Li, Y.-Q. Zhang, Microsoft Research Asia (China)

Comparison of spatial M-band filter banks for t+2D video coding [5960-42]
G. Pau, B. Pesquet-Popescu, GET-ENST (France)

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M. H. Kolekar, S. Sengupta, Indian Institute of Technology, Kharagpur (India)

A novel shot boundary detection framework [5960-44]
W. Zheng, J. Yuan, H. Wang, F. Lin, B. Zhang, Tsinghua Univ. (China)

Object-oriented video structuring via hidden Markov models [5960-45]
Y. Ding, L. Fan, Xidian Univ. (China)

Camera attention weighted strategy for video shot grouping [5960-46]
F. Jiang, Y.-J. Zhang, Tsinghua Univ. (China)

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S. Hasebe, Wireless & Visual Communications Co., Ltd. (Japan); M. M. Sami, S. Muramatsu, H. Kikuchi, Niigata Univ. (Japan)

Unsupervised sports video scene clustering and its applications to story units detection [5960-48]
W. Zhang, Harbin Institute of Technology (China); Q. Ye, Institute of Computing Technology, Chinese Academy of Sciences (China); L. Xing, Q. Huang, Graduate School, Chinese Academy of Sciences (China); W. Gao, Harbin Institute of Technology (China) and Institute of Computing Technology, Chinese Academy of Sciences (China)
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An adaptive grid algorithm for 3-D GIS landform optimization based on improved ant algorithm [5960-49]
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Y. Lin, Univ. of Waterloo (Canada)

Shadow synthesis in natural sequences using 3-D scene model [5960-51]
H. Nicolas, IRISA/INRIA (France)

An adaptive multiresolution mass-spring model [5960-52]
M. Garcia, L. Pastor, Univ. Rey Juan Carlos (Spain); A. Rodríguez, Univ. Politécnica de Madrid, Montegancedo (Spain)

Text2Video: text-driven facial animation using MPEG-4 [5960-53]
J. Rurainsky, P. Eisert, Fraunhofer Institute for Telecommunications - Heinrich-Hertz Institute (Germany)

Invisible marker based augmented reality system [5960-54]
H. Park, J.-I. Park, Hanyang Univ. (South Korea)

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B. Timmerman, P. Amon, A. Hutter, Siemens AG (Germany); F.-X. Coudoux, Univ. de Valenciennes (France)

Scalable video coding based on Wyner-Ziv framework [5960-56]
G. Ding, Q. Dai, Y. Yin, F. Yang, Tsinghua Univ. (China)

Rate control for scalable video model [5960-57]
L. Xu, S. Ma, Institute of Computing Technology, Chinese Academy of Sciences (China); D. Zhao, W. Gao, Institute of Computing Technology, Chinese Academy of Sciences (China) and Harbin Institute of Technology (China)

A fully scalable video coder with inter-scale wavelet prediction and morphological coding [5960-58]
N. Adami, M. Brescianini, M. Dalai, R. Leonard, A. Signoroni, Univ. of Brescia (Italy)

Extended spatial scalability for non dyadic video formats: from SDTV to HDTV [5960-59]
G. Marquant, E. François, N. Burdin, P. Lopez, J. Viéron, THOMSON Corporate Research (France)

Quality scalability in H.264/AVC video coding [5960-60]
V.-P. Limnell, D. Tian, Tampere Institute of Signal Processing (Finland); M. M. Hannuksela, Nokia Research Ctr. (Finland); M. Gabbouj, Tampere Univ. of Technology (Finland)

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Composition of MPEG-7 color and edge descriptors based on human vision perception [5960-61]
A. Lakdashti, Islamic Azad Univ./Sari Campus (Iran), Iran Telecom Research Ctr. (Iran), and Sharif Univ. of Technology (Iran); N. Kialashaki, A. Ghonoodi, Islamic Azad Univ./Sari Campus (Iran); M. Soltani, Sharif Univ. of Technology (Iran)

Automatic annotation techniques for gene expression images of the fruit fly embryo [5960-62]
M. Gargesha, J. Yang, B. Van Emden, S. Panchanathan, S. Kumar, Arizona State Univ. (USA)

Identification of image variations based on equivalence classes [5960-63]
Y. Maret, G. N. Garcia, T. Ebrahimi, Ecole Polytechnique Fédérale de Lausanne (Switzerland)

Atmosphere-based image classification through luminance and hue [5960-64]
F. Xu, Y.-J. Zhang, Tsinghua Univ. (China)

Region-based image retrieval using separated feature indexing [5960-65]
C.-Y. Tang, Huafan Univ. (Taiwan); J.-J. Chen, National Taiwan Univ. of Science and Technology (Taiwan); D.-H. Huang, Y.-C. Lee, Huafan Univ. (Taiwan)

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Q. Li, B. Zhang, Tsinghua Univ. (China)
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Improved intra prediction mode-decision method [5960-68]
Z. Zhang, G. Zhu, S. Dai, F. Wang, L. Xie, Huazhong Univ. of Science and Technology (China)

A unified framework for optimal multiple video object bit allocation [5960-69]
Z. Chen, K. N. Ngan, The Chinese Univ. of Hong Kong (China)

Recursive wavelet filters for video coding [5960-70]
D. Wang, L. Zhang, A. Vincent, Communications Research Ctr. Canada (Canada)

Adaptive GOF residual operation algorithm in video compression [5960-71]
J. Pan, B. Hu, Fudan Univ. (China)

Adaptive intra mode skipping algorithm for inter frame coding of H.264/AVC [5960-72]
C. Lai, C. Hao, Y. Xi, X. Shen, Northwestern Polytechnical Univ. (China)

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Error resilient video coding using flexible reference frames [5960-74]
Y.-K. Wang, Nokia Research Ctr. (Finland); C. Zhu, H. Li, Univ. of Science and Technology of China (China)

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H. Zhao, G. Wang, G. Hou, Central Research Academy (China)

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G. J. Sullivan, Microsoft Corp. (USA)

An overview of VC-1 [5960-77]
S. Srinivasan, S. L. Regunathan, Microsoft Corp. (USA)

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J. Luo, A. Loui, Eastman Kodak Co. (USA); M. Boutell, Univ. of Rochester (USA); P. Lei, Eastman Kodak Co. (USA)

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Y. Wang, T. Zhang, D. Tretter, P. Wu, Hewlett-Packard Labs. (USA)

Singing voice detection for karaoke application [5960-80]
A. Shenoy, Y. Wu, Y. Wang, National Univ. of Singapore (Singapore)

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Z. Li, Motorola Labs. (USA) and Northwestern Univ. (USA); F. Zhai, Texas Instruments (USA) and Northwestern Univ. (USA); A. K. Katsaggelos, Northwestern Univ. (USA)

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P. Wu, P. Obrador, Hewlett-Packard Labs. (USA)

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X. Xie, K.-M. Lam, The Hong Kong Polytechnic Univ. (China)

A monocular system for automatic face detection and tracking [5960-84]
G. N. Stamou, M. Krinidis, N. Nikolaidis, I. Pitas, Aristotle Univ. of Thessaloniki (Greece)

Gradient-based image segmentation for face recognition robust to directional illumination [5960-85]
K. Krzyszczuk, A. Drygajlo, Swiss Federal Institute of Technology, Lausanne (Switzerland)

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I. Kotsia, I. Pitas, Aristotle Univ. of Thessaloniki (Greece)
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X. Li, L. Shen, Beijing Univ. of Technology (China)

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D. Liu, Beijing Univ. of Technology (China) and The Academy of Equipment, Command and Technology (China);
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Q. Xu, V. Stanković, Z. Xiong, Texas A&M Univ. (USA)

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(Netherlands); R. L. Lagendijk, Delft Univ. of Technology (Netherlands) and Philips Research (Netherlands)

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J. Chou, A. Tabatabai, M. Visharam, Sony Electronics (USA)

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M. Tagliasacchi, S. Tubaro, Politecnico di Milano (Italy)

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X. Zhang, China Univ. of Mining and Technology (China) and Nanjing Univ. (China); Y. Li, X. Lin, M. Liu, China
Univ. of Mining and Technology (China); J. Xu, Nanjing Univ. (China)

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C.-F. Tsao, Y.-H. Chen, J.-H. Kuo, C.-W. Lin, J.-L. Wu, National Taiwan Univ. (Taiwan)

Locating barcodes using JPEG 2000 compressed data [5960-96]
X. Feng, Purdue Univ. (USA); M. J. Gormish, Ricoh Innovations, Inc. (USA)

A real-time vision-based human motion capturing [5960-97]
C.-L. Huang, B.-C. Shen, H.-C. Shih, National Tsing-Hua Univ. (Taiwan)

A morphology-based algorithm for label location and identification [5960-98]
Z. Nie, X. Zhang, X. Yang, Beihang Univ. (China)

Fractal dimension computation with the Parzon window and its application in target detection [5960-99]
L. Wang, Shenyang Institute of Automation, Chinese Academy of Sciences (China), Graduate School, Chinese
Academy of Sciences (China), and Shenyang Agricultural Univ. (China); Z. Shi, S. Huang, Shenyang Institute of
Automation, Chinese Academy of Sciences (China)

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R. Norcen, A. Uhl, Salzburg Univ. (Austria)

An efficient scheme to secure VLC codeword concatenations for video encryption [5960-101]
W. Li, Z. Xu, Y. Yao, Wuhan Univ. (China)

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Y. Wu, H. Pang, Institute for Infocomm Research (Singapore); R. H. Deng, Singapore Management Univ.
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J.-M. Seol, S.-W. Kim, Univ. of Seoul (South Korea)

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Y.-L. Huang, H.-Y. Lien, Tunghai Univ. (Taiwan)

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L. Zhang, R. Zhang, J. Zhou, Shanghai Jiaotong Univ. (China)

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F. Fu, L. Xu, X. Lin, Tsinghua Univ. (China)

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J. Chen, C. Cai, Huaqiao Univ. (China)

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J. Du, C. Wu, Y. Wang, Xidian Univ. (China)

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**Two-pass rate-distortion optimized rate control technique for H.264/AVC video [5960-113]**
W.-N. Lie, C.-F. Chen, T. C.-I. Lin, National Chung Cheng Univ. (Taiwan)

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Y. Liu, K. Tang, H. Cui, Tsinghua Univ. (China)

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M. Ramkumar, Mississippi State Univ. (USA); N. Memon, Polytechnic Univ. (USA)

**Digital watermarking based on multi-band wavelet and principal component analysis [5960-118]**
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**Management and protection of digital content with the flexible IPMP scheme - MPEG-21 IPMP [5960-119]**
Z. Huang, S. Shen, M. Ji, Panasonic Singapore Labs. (Singapore); T. Senoh, Matsushita Electric (Panasonic) (Japan)

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X. Wang, Contentguard, Inc. (USA)

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O. Harmanci, Univ. of Rochester (USA); M. K. Mihşışak, Microsoft Research (USA)

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G. Lavoué, F. Dupont, A. Baskurt, LIRIS, CNRS (France)

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X. Hu, K. R. Rao, Univ. of Texas at Arlington (USA)

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C. Yan, X. Fang, Y. Dong, Shanghai Jiaotong Univ. (China)

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T. Saito, H. Harada, T. Komatsu, Kanagawa Univ. (Japan)

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X. Zhu, S. Rane, B. Girod, Stanford Univ. (USA)

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C. Han, D. Yuan, Shandong Univ. (China)

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T.-K. Chiew, Institute for Infocomm Research (Singapore); P. Hill, P. Ferre, D. Agrafiotis, Univ. of Bristol (United Kingdom); J. T. H. Chung-How, ProVision Communication Technologies Ltd. (United Kingdom); A. Nix, D. R. Bull, Univ. of Bristol (United Kingdom) and ProVision Communication Technologies Ltd. (United Kingdom)

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S. Park, S. Lee, J. Kim, Gwangju Institute of Science and Technology (South Korea)

**Robust video transmission based on multiple description scalable coding with EREC [5960-200]**
H. Zheng, L. Yu, Fuzhou Univ. (China); C. W. Chen, Florida Institute of Technology (USA)

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M. Ramon, F.-X. Coudoux, M.-G. Gazalet, Univ. of Valenciennes, CNRS (France)

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K. De Wolf, R. De Sutter, W. De Neve, R. Van de Walle, Ghent Univ.-IBBT (Belgium)

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J. Sun, W. Gao, D. Zhao, Institute of Computing Technology, Chinese Academy of Sciences (China); Q. Huang, Graduate School of the Chinese Academy of Sciences (China)

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H. Song, S. Yu, L. Song, H. Xiong, Shanghai Jiao Tong Univ. (China)

**Quality control on the fully scalable wavelet video coder [5960-205]**
J.-J. Chen, K.-W. Wang, S.-C. Lee, National Taiwan Univ. of Science and Technology (Taiwan)

**Realization of 3-D DWT-SPIHT video compression algorithm [5960-206]**
S. Xu, B. Hu, J. Gao, Fudan Univ. (China)

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H.-S. Kong, A. Vetro, Mitsubishi Electric Research Labs. (USA); T. Hata, N. Kuwahara, Mitsubishi Electric Corp. (Japan)

**Transcoding of MPEG-4 BIFS into MPEG-4 LASeR [5960-208]**
Q. Shahab, M. Kim, Information and Communications Univ. (South Korea)

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Z. He, M. Bystrom, S. H. Nawab, Boston Univ. (USA)

**Rate control for transcoding in video transmission between heterogeneous networks [5960-210]**
S. Lai, F. Li, Tsinghua Univ. (China)

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An adaptive edge preserving variational method for color image regularization [5960-215]
Z. Lin, A. Sluzek, MD. S. Islam, Nanyang Technological Univ. (Singapore)

A novel parallel architecture for local histogram equalization [5960-216]
M. I. Ohannessian, G. F. Choueiter, Massachusetts Institute of Technology (USA); H. Diab, American Univ. of Beirut (Lebanon)

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Statistics based fast intra mode detection [5960-220]
R. Garg, M. Jindal, M. Chauhan, FastVDO RMC Pvt. Ltd. (USA)

Fast decision on picture adaptive frame/field coding for H.264 [5960-221]
P. Yin, A. M. Tourapis, J. Boyce, Thomson Inc. (USA)

Rate distortion optimized quantization for H.264/AVC based on dynamic programming [5960-222]
W. Wang, H. Cui, K. Tang, Tsinghua Univ. (China)

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I-S. Kuo, L.-H. Chen, National Chiao Tung Univ. (Taiwan)

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M. Kodama, H. Hayakawa, Hiroshima Univ. (Japan)

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E. Setton, B. Girod, Stanford Univ. (USA)

Constant quality constrained bit allocation for leaky prediction based FGS video streaming [5960-233]
J. Wu, J. Cai, Nanyang Technological Univ. (Singapore); C. W. Chen, Florida Institute of Technology (USA)

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M. Narroschke, Univ. Hannover (Germany)

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F. Li, N. Ling, Santa Clara Univ. (USA)

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E. Bondarev, Eindhoven Univ. of Technology (Netherlands); M. Pastrnak, P. H. N. de With, Eindhoven Univ. of Technology (Netherlands) and LogicaCMG Nederland (Netherlands); M. R. V. Chaudron, Eindhoven Univ. of Technology (Netherlands)

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