

# Contents

## Image Processing

Color Constancy Using Illuminant-Invariant LBP Features . . . . .	3
<i>Yan Xia and Chen Yao</i>	
A New Source-Side De-interlacing Method for High Quality Video Content . . . . .	12
<i>Yulai Bi, Xiaoyun Zhang, and Zhiyong Gao</i>	
Accelerating Digital Watermarking Algorithm Based on SOC. . . . .	24
<i>Jing Chen, Hong Fan, Yanzi Sun, and Haiquan Ma</i>	
Scrolling Subtitle Processing of Frame Rate Up-Conversion Based on Global Text Motion Estimation . . . . .	34
<i>Guirui Li, Xiaoyun Zhang, and Zhiyong Gao</i>	
Liver Segmentation in Ultrasound Images by Using FCM and Mean Shift . . .	44
<i>Hong Ding, Huiqun Wu, Nianmei Gong, Jun Wang, Shi Chen, and Xiaofeng Zhang</i>	
A Modified Joint Trilateral Filter for Depth Image Super Resolution . . . . .	53
<i>Shengqian Zhang, Wei Zhong, Long Ye, and Qin Zhang</i>	
A Modified Just Noticeable Depth Difference Model for 3D Displays . . . . .	63
<i>Chunhua Li, Ping An, Liquan Shen, Kai Li, and Jian Ma</i>	
A Joint Spatial-Temporal 3D Video Stabilization Algorithm. . . . .	72
<i>Jie Zhou, Zhixiang You, Ping An, Xinliang Wu, and Tengyue Du</i>	
Enhanced SURF-Based Image Matching Using Pre- and Post-processing . . . .	83
<i>Chenfei Zhang, Yaozu Wu, Ning Liu, and Chongyang Zhang</i>	
Stereoscopic Image Quality Assessment Using Wavelet Decomposition and Natural Scene Statistics . . . . .	93
<i>Xianqiu Geng, Liquan Shen, Yang Yao, and Ping An</i>	
Combining Visual Saliency and Binocular Energy for Stereoscopic Image Quality Assessment . . . . .	104
<i>Yang Yao, Liquan Shen, Xianqiu Geng, and Ping An</i>	
An Effective Crowd Property Analysis System for Video Surveillance Application . . . . .	115
<i>Shuying Yang, Hua Yang, Jijia Li, and Ji Zhu</i>	

Webpage Image Saliency Prediction via Adaptive SVM. . . . .	128
<i>Wei Shan, Guangling Sun, and Zhi Liu</i>	
Face Recognition Based on Weighted Multi-order Feature Fusion of 2D-FrFT . . . . .	137
<i>Xu Wang, Lin Qi, Yun Tie, and Enqing Chen</i>	
Parallel-Friendly Frame Rate Up-Conversion Algorithm Based on Patch Match. . . . .	146
<i>Xu Jiang, Li Chen, Zhiyong Gao, and Xiaoyun Zhang</i>	
Automatic Exudate Detection in Color Fundus Images. . . . .	155
<i>Fucong Qi, Guo Li, and Shibao Zheng</i>	
View-Specific Based Error Concealment Scheme for Multi-view Plus Depth Video . . . . .	166
<i>Ran Ma, Xiangyu Hu, Deyang Liu, Yu Hou, and Ping An</i>	
Mesh Denoising with Local Guided Normal Filtering and Non-local Similarity . . . . .	176
<i>Wenbo Zhao, Xianming Liu, Jiantao Zhou, Debin Zhao, and Wen Gao</i>	
BD_CNN Based Pedestrians and Vehicle Recognition in Video Surveillance . . . . .	185
<i>Xueqin Zhang, Ting Fang, and Qiuchen Gu</i>	
The Subway Pantograph Detection Using Modified Faster R-CNN . . . . .	197
<i>Ruimin Ge, Yu Zhu, Yuling Xiao, and Zhihua Chen</i>	
Multi-scale Deep Residual Networks for Fine-Grained Image Classification . . .	205
<i>Xiangyang Wang, Yusu Jin, Zhi Liu, Yadong Zhao, Xiaoqiang Zhu, and Juan Zhang</i>	
Cross-Media Retrieval by Multimodal Representation Fusion with Deep Networks . . . . .	218
<i>Jinwei Qi, Xin Huang, and Yuxin Peng</i>	
<b>Audio Processing</b>	
Blind Estimation of Spectral Standard Deviation from Room Impulse Response for Reverberation Level Recognition Based on Linear Prediction . . . . .	231
<i>Sai Ma and Xi Xie</i>	
Deep Learning Based Language Modeling for Domain-Specific Speech Recognition. . . . .	242
<i>Jing Zhu, Xinwei Gong, and Guilin Chen</i>	

## Image and Video Compression

Fast Intra Encoding Decisions Based on Horizontal-Vertical Progressive Gradient Accumulation for HEVC. . . . .	255
<i>Zhenglong Yang, Guozhong Wang, Tao Fan, and Guowei Teng</i>	
An Efficient Optimization of Real-Time AVS+ Encoder in Low Bitrate Condition. . . . .	265
<i>Li Cao, Xiaoyun Zhang, and Zhiyong Gao</i>	
An Improved 3D Holoscopic Image Coding Scheme Using HEVC Based on Gaussian Mixture Models. . . . .	276
<i>Deyang Liu, Ping An, Tengtue Du, Ran Ma, and Liquan Shen</i>	
A Novel Image Coding Framework Based on Content Similarity Analysis . . .	286
<i>Qianhan Liu, Long Ye, Jingling Wang, and Qin Zhang</i>	
Block of Interest Based AVS to HEVC Transcoding with Resolution Conversion . . . . .	296
<i>Malik Asfandiyar, Mehmood Nawaz, Xie Rong, Liang Zhang, and Muddsser Hussain</i>	
Fast Intra Coding in an Efficient HEVC Multi-rate Encoding System Based on x265 . . . . .	307
<i>Dongbin Cheng, Xiaoyun Zhang, and Zhiyong Gao</i>	
3D Holoscopic Images Coding Scheme Based on Viewpoint Image Rendering. . . . .	318
<i>Ling Yang, Ping An, Deyang Liu, and Ran Ma</i>	
A Fast Inter-frame Prediction Algorithm for AVS2 Based on Mode Complexity. . . . .	328
<i>Fang Chen, Guoping Li, Guozhong Wang, and Haiwu Zhao</i>	
Content Oriented Video Quality Prediction for HEVC Encoded Stream . . . . .	338
<i>Kanghua Zhu, Yongfang Wang, Jian Wu, Yun Zhu, and Wei Zhang</i>	
Fast Mode Decision Algorithm for Quality Scalable HEVC . . . . .	349
<i>Mengmeng Kang, Ran Ma, Zefu Li, Xiangyu Hu, and Ping An</i>	
A Novel Rate Control Algorithm for Low Complexity Frame Compression System . . . . .	358
<i>Junqing Gong, Li Chen, Jia Wang, and Zhiyong Gao</i>	

**Telecommunications**

L-Band Land Mobile Satellite Channel Characteristic Analysis  
for Geosynchronous Satellite . . . . . 371  
*Guangmin Wang, Dazhi He, Yin Xu, Yunfeng Guan, Wenjun Zhang,  
and Yihang Huang*

Low-Complexity Soft-Decision Decoder Architecture for BCH Code in the  
BeiDou System. . . . . 383  
*Chaoyi Zhang, Haiyang Liu, Songlin Ou, Jinhai Li, Jinhai Sun,  
and Yuepeng Yan*

**Author Index** . . . . . 393

Digital TV and Wireless Multimedia Communication  
13th International Forum, IFTC 2016, Shanghai, China,  
November 9-10, 2016, Revised Selected Papers  
Yang, X.; Zhai, G. (Eds.)  
2017, XII, 394 p. 221 illus., Softcover  
ISBN: 978-981-10-4210-2