Fusion Technique for Infrared and Visible Images Based on Improved Quantum Theory Model ................................................................. 1
    Weiwei Kong, Yang Lei, and Minmin Ren

Skeleton-Based Human Action Recognition with Profile Hidden Markov Models ................................................................. 12
    Wenwen Ding, Kai Liu, Fei Cheng, Huan Shi, and Baijian Zhang

Single Image Super-Resolution via Blind Blurring Estimation and Dictionary Learning ................................................................. 22
    Xiaole Zhao, Yadong Wu, Jinsha Tian, and Hongying Zhang

Two-layers Local Coordinate Coding ................................................................. 34
    Wei Xiao, Hong Liu, Hao Tang, and Huaping Liu

A Graph Matching and Energy Minimization Based Algorithm for Lunar Surface Image Mosaic ................................................................. 46
    Chuan Li, Zhi-Yong Liu, Xu Yang, Hong Qiao, and Chuan-Kai Liu

A Real Time Robust Hand Tracking Method with Normal Cameras ................................................................. 56
    Yang Liu, Man Yau Chiu, Hailiang Li, Kangheng Wu, Zhibin Lei, and Qiang Ding

Hypergraph Regularized Autoencoder for 3D Human Pose Recovery ................................................................. 66
    Chaoqun Hong, Jun Yu, You Jane, and Xuhui Chen

Target Recognition Based on Feature Weighted Intuitionistic FCM ................................................................. 76
    Yang Lei, Shuguang Liu, and Weiwei Kong

The Modified Mumford-Shah Model Based on Nonlocal Means Method for Textures Segmentation ................................................................. 86
    Jingge Lu, Guodong Wang, and Zhenkuan Pan

Segmentation-Based Salient Object Detection ................................................................. 94
    Kai-Fu Yang, Xin Gao, Ju-Rong Zhao, and Yong-Jie Li

Non-uniform Motion Deblurring Using Normalized Hyper Laplacian Prior ................................................................. 103
    Guodong Wang, Bin Wei, Zhenkuan Pan, Jingge Lu, and Zhaojing Diao
Robust Mean Shift Tracking Based on Refined Appearance Model and Online Update .................................................. 114
   Wangsheng Yu, Zhiqiang Hou, Xiaohua Tian, and Dan Hu

An Effective Multiview Stereo Method for Uncalibrated Images ............. 124
   Peng Cui, Yiguang Liu, Pengfei Wu, Jie Li, and Shoulin Yi

The Human Image Segmentation Algorithm Based on Face Detection and Biased Normalized Cuts ........................................... 134
   Shaojun Qu and Qiaoliang Li

Survey on Eye Movement Based Authentication Systems .................. 144
   Yun Zhang and Xuanqin Mou

A Discriminant Sparse Representation Graph-Based Semi-Supervised Learning for Hyperspectral Image Classification .......................... 160
   Yuanjie Shao, Changxin Gao, and Nong Sang

Multispectral Image Classification Using a New Bayesian Approach with Weighted Markov Random Fields ........................................... 168
   Shengxi Li, Ying Wang, Jie Li, and Xinbo Gao

Effective Facial Expression Recognition via the Boosted Convolutional Neural Network ................................................................. 179
   Zhenhai Liu, Hanzi Wang, Yan Yan, and Guanjun Guo

Structured Sparse Coding for Classification via Reweighted $\ell_{2,1}$ Minimization ................................................................. 189
   Yong Xu, Yuping Sun, Yuhui Quan, and Yu Luo

Detail-Enhanced Cross-Modality Face Synthesis via Guided Image Filtering ................................................................. 200
   Yunqi Dang, Feng Li, Zhaoxin Li, and Wangmeng Zuo

Edge-Directed Single Image Super-Resolution via Cross-Resolution Sharpening Function Learning ............................................... 210
   Wei Han, Jun Chu, Lingfeng Wang, and Chunhong Pan

Compressive Tracking Based on Particle Filter ..................................... 220
   Yun Gao, Hao Zhou, Guowu Yuan, and Xuejie Zhang

An Adaptive Threshold Algorithm for Moving Object Segmentation ........ 230
   Yumin Tian, Dan Wang, Risan Lin, and Qichao Chen

Interactive Registration and Segmentation for Multi-Atlas-Based Labeling of Brain MR Image ........................................... 240
   Qian Wang, Guorong Wu, Min-Jeong Kim, Lichi Zhang, and Dinggang Shen
Negative-Supervised Cascaded Deep Learning for Traffic Sign Classification ................................. 249
   Kaixuan Xie, Shiming Ge, Rui Yang, Xiang Lu, and Limin Sun

Saliency Detection Based on Non-uniform Quantification for RGB Channels and Weights for Lab Channels ................................................ 258
   Yahui Yuan, Aili Han, and Feilin Han

Edge-Based Unsupervised Evaluation of Image Segmentation ................................. 267
   Yihui Liang, Han Huang, and Zhaoquan Cai

An Adaptive Fuzzy Clustering Algorithm Based on Multi-threshold for Infrared Image Segmentation ................................................ 277
   Jin Liu, Yanli Liu, and Qianqian Ge

Locally Linear Embedding Based Dynamic Texture Synthesis ................................. 287
   Weigang Guo, Xinge You, Ziqi Zhu, Yi Mou, and Dachuan Zheng

A Deep Joint Learning Approach for Age Invariant Face Verification ................................. 296
   Ya Li, Guangrun Wang, Liang Lin, and Huiyou Chang

A New Similarity Measure for Non-local Means Denoising ................................................ 306
   Bin Cai, Wei Liu, Zhong Zheng, and Zeng-Fu Wang

Mixture Models for Object Detection ................................................ 317
   Xiaoqin Kuang, Nong Sang, Feifei Chen, Changxin Gao, and Runmin Wang

An Image Forensic Technique Based on 2D Lighting Estimation Using Spherical Harmonic Frames ................................................ 325
   Wenyong Zhao and Hong Liu

Class Relatedness Oriented Discriminative Dictionary Learning ................................................ 335
   Pengju Liu, Hongzhi Zhang, Kai Zhang, Changchun Luo, and Wangmeng Zuo

Building an Effective Template Dictionary for Robust Offline Video Tracking ................................................ 344
   Fei Liu, Xiaojin Zhang, Mingyu Fan, Di Wang, Hongxing Jiang, and Xiuzi Ye

Learning Blur Invariant Face Descriptors for Face Verification Under Realistic Environment ................................................ 355
   Zhan-Xiang Feng, Yang Yuan, and Jian-Huang Lai

Modified Numerical Scheme for Perona-Malik Model in Image Restoration ................................................ 366
   Zhiyi Ruan, Youjian Shen, and Fengling Liu
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abnormal Event Detection Based on Multi-scale Markov Random Field</td>
<td>376</td>
</tr>
<tr>
<td><em>Lei Qin, Yituo Ye, Li Su, and Qingming Huang</em></td>
<td></td>
</tr>
<tr>
<td>Light-Weight Spatial Distribution Embedding of Adjacent Features for</td>
<td>387</td>
</tr>
<tr>
<td>Image Search</td>
<td></td>
</tr>
<tr>
<td><em>Yan Zhang, Yao Zhao, Shikui Wei, and Zhenfeng Zhu</em></td>
<td></td>
</tr>
<tr>
<td>Cross-Level: A Practical Strategy for Convolutional Neural Networks</td>
<td>398</td>
</tr>
<tr>
<td>Based Image Classification</td>
<td></td>
</tr>
<tr>
<td><em>Yu Liu, Baocai Yin, Jun Yu, and Zeng-Fu Wang</em></td>
<td></td>
</tr>
<tr>
<td>Superpixel-Based Global Contrast Driven Saliency Detection in Low</td>
<td>407</td>
</tr>
<tr>
<td>Contrast Images</td>
<td></td>
</tr>
<tr>
<td><em>Nan Mu and Xin Xu</em></td>
<td></td>
</tr>
<tr>
<td>Decoupled Marginal Distribution of Gradient Magnitude and Laplacian</td>
<td>418</td>
</tr>
<tr>
<td>of Gaussian for Texture Classification</td>
<td></td>
</tr>
<tr>
<td><em>Wufeng Xue, Xuanqin Mou, and Lei Zhang</em></td>
<td></td>
</tr>
<tr>
<td>MR Image Segmentation Using Active Contour Model Incorporated</td>
<td>429</td>
</tr>
<tr>
<td>with Sobel Edge Detection</td>
<td></td>
</tr>
<tr>
<td><em>Honggang Zhang, Yunhong Wang, Qingjie Liu, and Di Huang</em></td>
<td></td>
</tr>
<tr>
<td>Spatial-Temporal Feature Fusion for Human Fall Detection</td>
<td>438</td>
</tr>
<tr>
<td><em>Xin Ma, Haibo Wang, Bingxia Xue, and Yibin Li</em></td>
<td></td>
</tr>
<tr>
<td>Color Image Segmentation Combining Rough Depth Information</td>
<td>448</td>
</tr>
<tr>
<td><em>Wen Su, Jing Qian, Zhiming Pi, and Zeng-Fu Wang</em></td>
<td></td>
</tr>
<tr>
<td>Author Index</td>
<td>459</td>
</tr>
</tbody>
</table>
Directional Segmentation Based on Shear Transform and Shape Features for Road Centerlines Extraction from High Resolution Images .......................... 1
   Ruyi Liu, Qiguang Miao, Jianfeng Song, and Qing Xue

Sparse Representation with Regularization Term for Face Recognition ........ 10
   Jian Ji, Huafeng Ji, and Mengqi Bai

Salient Region Detection by Region Color Contrast and Connectivity Prior .... 21
   Mei-Huan Chen, Yan Dou, and Shi-Hui Zhang

Simultaneously Retargeting and Super-Resolution for Stereoscopic Video ...... 31
   Kai Kang, Jing Zhang, Yang Cao, and Zeng-Fu Wang

Local Variation Joint Representation for Face Recognition with Single Sample per Person ................................................................. 41
   Meng Yang, Tiancheng Song, Shiqi Yu, and Linlin Shen

Multi-view Sparse Embedding Analysis Based Image Feature Extraction and Classification .......................................................... 51
   Yangping Zhu, Xiaoyuan Jing, Qing Wang, Fei Wu, Hui Feng, and Shanshan Wu

Automatic Image Semantic Annotation Based on the Tourism Domain Ontological Knowledge Base ...................................................... 61
   Pengfei Zhang, Junping Du, Dan Fan, and Yipeng Zhou

Triple Online Boosting Training for Fast Object Detection ...................... 70
   Ning Sun, Feng Jiang, Yuze Shan, Jixin Liu, Liu Liu, and Xiaofei Li

Structured Regularized Robust Coding for Face Recognition .................... 80
   Meng Yang, Tiancheng Song, Feng Liu, and Linlin Shen

Research and Application of Moving Target Tracking Based on Multi-innovation Kalman Filter Algorithm ........................................... 90
   Pinle Qin, Guohong Lv, MaoMao Liu, Qiguang Miao, and Xiaoqing Chen

Visual Tracking via Structure Rearrangement and Multi-scale Block Appearance Model ........................................................... 106
   Guang Han, Xinyue Wang, and Jimuyang Zhang

Convolutional Neural Networks for Clothes Categories .......................... 120
   Zhi Li, Yubao Sun, Feng Wang, and Qingshan Liu
Multi-object Segmentation for Abdominal CT Image Based on Visual Patch Classification ................................................................. 130
    Pan Li, Jun Feng, QiRong Bu, Feihong Liu, and HongYu Wang

Improved 3D Local Feature Descriptor Based on Rotational Projection Statistics and Depth Information ........................................... 139
    Hui Zeng, Rui Zhang, and Mingming Huang

Pedestrian Tracking in Infrared Image Sequence Based on Spatio-temporal Slice Trajectory Analysis .................................................. 148
    Dongmei Fu and Pan Shu

Exploring Deep Gradient Information for Face Recognition .................... 159
    Jianjun Qian, Jian Yang, and Ying Tai

A Novel Dynamic Character Grouping Approach Based on the Consistency Constraints ................................................................. 170
    Pengfei Xu, Qiguang Miao, Ruyi Liu, Feng Chen, Xiaojiang Chen,
    and Weike Nie

A Digital Video Stabilization System Based on Reliable SIFT Feature
Matching and Adaptive Low-Pass Filtering ........................................ 180
    Jun Yu, Chang-Wei Luo, Chen Jiang, Rui Li, Ling-Yan Li,
    and Zeng-Fu Wang

A Tree-Structured Feature Matching Algorithm .................................... 190
    Xiongwei Sun, Xiubo Ma, Lei Chen, Li Wan, and Xinhua Zeng

Crack Detection in Tread Area Based on Analysis of Multi-scale Singular
Area ................................................................................................... 201
    Li Jinping, Hou Wendi, Han Yanbin, and Yin Jianqin

Multiple Scaled Person Re-Identification Framework for HD Video
Surveillance Application ...................................................................... 219
    Hua Yang, Xinyu Wang, Wenqi Ma, Hang Su, and Ji Zhu

Aesthetic Image Classification Based on Multiple Kernel Learning ........ 229
    Ningning Liu, Xin Jin, Hui Lin, and De Zhang

1000 Fps Highly Accurate Eye Detection with Stacked Denoising
Autoencoder ................................................................................. 237
    Wei Tang, Yongzhen Huang, and Liang Wang

Motion Compensation Based Fast Moving Object Detection in Dynamic
Background ................................................................................... 247
    Wei Zhang, Chenglong Li, Aihua Zheng, Jin Tang, and Bin Luo
A Discriminative Framework for Hashing ............................... 257
   Lijie Ding, Xiumei Wang, and Xinbo Gao

Image Quality Assessment Based on Local Pixel Correlation .......... 266
   Hongqiang Xu, Wen Lu, Yuling Ren, and Lihuo He

Fast Image Quality Assessment via Hash Code .......................... 276
   Lihuo He, Qi Liu, Di Wang, and Wen Lu

Shooting Recognition and Simulation in VR Shooting Theaters ......... 286
   Shuo Feng, Wei Gai, Yanning Xu, Tingting Cui, Pu Qin, Huiyu Li,
   Dongdong Guan, Chenglei Yang, and Xiangxu Meng

An Improved Image Quality Assessment in Gradient Domain ........... 293
   Yuling Ren, Wen Lu, Lihuo He, and Tianjiao Xu

A New Dataset and Evaluation for Infrared Action Recognition ........ 302
   Chenqiang Gao, Yinhe Du, Jiang Liu, Luyu Yang, and Deyu Meng

Building Segmentation and Classification from Aerial LiDAR via Local
   Planar Features ...................................................................... 313
   Jun Chu, Wei Han, Wei Sui, Lingfeng Wang, Qi Wen,
   and Chunhong Pan

2DPCANet: Dayside Aurora Classification Based on Deep Learning ..... 323
   Zhonghua Jia, Bing Han, and Xinbo Gao

An Accelerated Two-Step Iteration Hybrid-norm Algorithm for Image
   Restoration .............................................................................. 335
   Yong Wang, Wenjuan Xu, Xiaoyu Yang, Qianqian Qiao, Zheng Jia,
   and Quanxue Gao

SiftKeyPre: A Vehicle Recognition Method Based on SIFT Key-Points
   Preference in Car-Face Image .................................................. 344
   Chang-You Zhang, Xiao-Ya Wang, Jun Feng, and Yu Cheng

RGB-D Salient Object Detection via Feature Fusion and Multi-scale
   Enhancement ............................................................................ 359
   Peiliang Wu, Liangliang Duan, and Lingfu Kong

Object Color Constancy for Outdoor Multiple Light Sources .......... 369
   Liangqiong Qu, Zhigang Duan, Jiandong Tian, Zhi Han,
   and Yandong Tang

Feature-Based 3D Reconstruction Model for Close-Range Objects
   and Its Application to Human Finger ....................................... 379
   Feng Liu, Linlin Shen, and David Zhang
Contour Extraction Based on Human Visual System ........................................... 394
   Xiaosheng Yang and Yinfeng Li

A Sparse Pyramid Pooling Strategy ............................................................... 406
   Lu Wang, Shengrong Gong, Chunping Liu, Yi Ji, and Mengye Song

A New Research on Contrast Sensitivity Function Based on Three-Dimensional Space ................................................................. 417
   Jiachen Yang, Yun Liu, Wei Wei, Qinggang Meng, Zhiqun Gao, and Yancong Lin

An Algorithm Combined with Color Differential Models for License-Plate Location ................................................................. 429
   Xiangdong Zhang, Peiyi Shen, Juan Song, Liang Zhang, Weibin Gong, Wei Wei, Yuanmei Tian, and Guangming Zhu

A New Image Watermarking Algorithm Using the Contourlet Transform and the Harris Detector ........................................ 439
   Dandan Zhu and Lizhi Lv

Multi-object Visual Tracking Algorithm Based on Grey Relational Analysis and Generalized Linear Assignment ................................ 448
   Yanzhao Su, Aihua Li, Zhigao Cui, Hao Fang, and Tao Wang

Codebook Cardinality Spectrum of Distributed Arithmetic Codes for Nonuniform Binary Sources ........................................... 458
   Yayun Liu and Yong Fang

Author Index ........................................................................................................ 469
Computer Vision
CCF Chinese Conference, CCCV 2015, Xi'an, China, September 18-20, 2015, Proceedings, Part I
Zha, H.; Chen, X.; Wang, L.; Miao, Q. (Eds.)
2015, XX, 462 p. 200 illus. in color., Softcover
ISBN: 978-3-662-48557-6