

Table of Contents

Invited Lectures (Abstracts)

Session 1: Steganography and Steganalysis

New Channel Selection Criterion for Spatial Domain Steganography	1
<i>Yane Zhong, Fangjun Huang, and Dong Zhang</i>	
A Study of Optimal Matrix for Efficient Matrix Embedding in \mathbb{F}_3	8
<i>Yuanzhi Qi, Xiaolong Li, Bin Wang, and Bin Yang</i>	
A Novel Mapping Scheme for Steganalysis	19
<i>Licong Chen, Yun Qing Shi, Patchara Sutthiwan, and Xinxin Niu</i>	
Steganalysis of LSB Matching Based on the Sum Features of Average Co-occurrence Matrix Using Image Estimation	34
<i>Yan-qing Guo, Xiang-wei Kong, Bo Wang, and Qian Xiao</i>	
Calibration Based Reliable Detector for Detecting LSB Matching Steganography	44
<i>Fei Peng, Xiaolong Li, and Bin Yang</i>	
LSB Replacement Steganography Software Detection Based on Model Checking	54
<i>Zheng Zhao, Fenlin Liu, Xiangyang Luo, Xin Xie, and Lu Yu</i>	
An Attempt to Generalize Distortion Measure for JPEG Steganography	69
<i>Vasily Sachnev and Hyoung Joong Kim</i>	

Session 2: Watermarking and Copyright Protection

Optimal Data Embedding in 3D Models for Extraction from 2D Views Using Perspective Invariants	83
<i>Yağız Yaşaroğlu and A. Aydın Alatan</i>	
Consideration of the Watermark Inversion Attack and Its Invalidation Framework	98
<i>Kazuo Ohzeki, YuanYu Wei, Yutaka Hirakawa, and Kiyosugu Sato</i>	
Geometrically Invariant Image Blind Watermarking Based on Spedded-Up Robust Features and DCT Transform	111
<i>Huang Zhang and Xiao-qiang Li</i>	

Self-embedding Fragile Watermarking Scheme Combined Average with VQ Encoding	120
<i>Hongjie He, Fan Chen, and Yaoran Huo</i>	
An Efficient Fragile Web Pages Watermarking for Integrity Protection of XML Documents	135
<i>Quan Wen and Yufei Wang</i>	
Image Information Hiding Based on Binary Holography of Iterative Conjugate-Symmetric Extension	145
<i>Qiyin Zhao, Daqing Chen, Zhi Tao, and Jihua Gu</i>	
High Capacity Data Hiding for Halftone Image Authentication	156
<i>Meng Guo and Hongbin Zhang</i>	
Coded Spread Spectrum Watermarking Scheme	169
<i>Minoru Kuribayashi</i>	
Enhancement of Method for Preventing Unauthorized Copying of Displayed Information Using Object Surface Reflection	184
<i>Takayuki Yamada, Seiichi Gohshi, and Isao Echizen</i>	

Session 3: Forensics and Anti-Forensics

Image Splicing Verification Based on Pixel-Based Alignment Method . . .	198
<i>Rimba Whidiana Ciptasari, Kyung-Hyune Rhee, and Kouichi Sakurai</i>	
Multimedia Operator Chain Topology and Ordering Estimation Based on Detection and Information Theoretic Tools	213
<i>Pedro Comesaña and Fernando Pérez-González</i>	
Distinguishing Computer Graphics from Photographic Images Using Local Binary Patterns	228
<i>Zhaohong Li, Jingyu Ye, and Yun Qing Shi</i>	
Detecting Removed Object from Video with Stationary Background . . .	242
<i>Leida Li, Xuewei Wang, Wei Zhang, Gaobo Yang, and Guozhang Hu</i>	
Audio Forgery Detection Based on Max Offsets for Cross Correlation between ENF and Reference Signal	253
<i>Yongjian Hu, Chang-Tsun Li, Zhisheng Lv, and Bei-bei Liu</i>	
A Novel Video Inter-frame Forgery Model Detection Scheme Based on Optical Flow Consistency	267
<i>Juan Chao, Xinghao Jiang, and Tanfeng Sun</i>	
Countering Universal Image Tampering Detection with Histogram Restoration	282
<i>Luyi Chen, Shilin Wang, Shenghong Li, and Jianhua Li</i>	

Face Verification Using Color Sparse Representation	290
<i>Wook Jin Shin, Seung Ho Lee, Hyun-seok Min, Hosik Sohn, and Yong Man Ro</i>	
Rapid Image Splicing Detection Based on Relevance Vector Machine . . .	300
<i>Bo Su, Quanqiao Yuan, Yujin Zhang, Mengying Zhai, and Shilin Wang</i>	
An Efficient Speech Content Authentication Algorithm Based on Coefficients Self-Correlation Degree	311
<i>Zhengkui Liu and Hongxia Wang</i>	
Saliency-Based Region Log Covariance Feature for Image Copy Detection	327
<i>Xin He, Huiyun Jing, Qi Han, and Xiamu Niu</i>	
Blind Detection of Electronic Voice Transformation with Natural Disguise	336
<i>Yong Wang, Yanhong Deng, Haojun Wu, and Jiwu Huang</i>	
Robust Median Filtering Detection Based on Filtered Residual	344
<i>Anjie Peng and Xiangui Kang</i>	

Session 4: Reversible Data Hiding

Reversible Data Hiding in Encrypted Images Using Pseudorandom Sequence Modulation	358
<i>Xinpeng Zhang, Chuan Qin, and Guangling Sun</i>	
Optimal Histogram-Pair and Prediction-Error Based Image Reversible Data Hiding	368
<i>Guorong Xuan, Xuefeng Tong, Jianzhong Teng, Xiaojie Zhang, and Yun Qing Shi</i>	
An Improved Algorithm for Reversible Data Hiding in Encrypted Image	384
<i>Jie Yu, Guopu Zhu, Xiaolong Li, and Jianquan Yang</i>	
Reversible Watermarking for Audio Authentication Based on Integer DCT and Expansion Embedding	395
<i>Quan Chen, Shijun Xiang, and Xinrong Luo</i>	

Session 5: Fingerprinting and Authentication

Automatic Anonymous Fingerprinting of Text Posted on Social Networking Services	410
<i>Hoang-Quoc Nguyen-Son, Minh-Triet Tran, Dung Tran Tien, Hiroshi Yoshiura, Noboru Sonehara, and Isao Echizen</i>	

Memoryless Hash-Based Perceptual Image Authentication 425
Fang Liu, Qi-Kai Fu, and Lee-Ming Cheng

Session 6: Visual Cryptography

Visual Cryptography Based Watermarking: Definition and Meaning 435
Stelvio Cimato, James Ching-Nung Yang, and Chih-Cheng Wu

Region-in-Region Incrementing Visual Cryptography Scheme 449
James Ching-Nung Yang, Yi-Chin Lin, and Chih-Cheng Wu

A Secret Enriched Visual Cryptography 464
Feng Liu, Wei Q. Yan, Peng Li, and Chuankun Wu

On the Security of Multi-secret Visual Cryptography Scheme with Ring
Shares 485
Zheng-xin Fu and Bin Yu

Session 7: Others

An Image Super-Resolution Scheme Based on Compressive Sensing
with PCA Sparse Representation 495
Aixin Zhang, Chao Guan, Haomiao Jiang, and Jianhua Li

A Novel JFE Scheme for Social Multimedia Distribution in Compressed
Domain Using SVD and CA 507
*Conghuan Ye, Hefei Ling, Fuhao Zou, Zhengding Lu,
Zenggang Xiong, and Kaibing Zhang*

A Robust Image Classification Scheme with Sparse Coding and
Multiple Kernel Learning 520
Dongyang Cheng, Tanfeng Sun, and Xinghao Jiang

Author Index 531