Contents

Digital Forensics

Image Noise and Digital Image Forensics. .......................... 3
   Thibaut Julliand, Vincent Nozick, and Hugues Talbot

Camera Source Identification with Limited Labeled Training Set. .......... 18
   Yue Tan, Bo Wang, Ming Li, Yanqing Guo, Xiangwei Kong,
   and Yunqing Shi

Detecting Video Forgery by Estimating Extrinsic Camera Parameters ...... 28
   Xianglei Hu, Jiangqun Ni, and Runbiao Pan

Discriminating Between Computer-Generated Facial Images and Natural
Ones Using Smoothness Property and Local Entropy. ......................... 39
   Huy H. Nguyen, Hoang-Quoc Nguyen-Son, Thuc D. Nguyen,
   and Isao Echizen

Multiple MP3 Compression Detection Based on the Statistical Properties
of Scale Factors .......................................................... 51
   Jinglei Zhou, Rangding Wang, Chao Jin, and Diqun Yan

Detection of Double Compression for HEVC Videos Based
on the Co-occurrence Matrix of DCT Coefficients. .......................... 61
   Meiling Huang, Rangding Wang, Jian Xu, Dawen Xu, and Qian Li

An Advanced Texture Analysis Method for Image Sharpening Detection .... 72
   Feng Ding, Weiqiang Dong, Guopu Zhu, and Yun-Qing Shi

Source Camera Model Identification Using Features from Contaminated
Sensor Noise .............................................................. 83
   Amel Tuama, Frederic Comby, and Marc Chaumont

Inter-frame Forgery Detection for Static-Background Video Based on MVP
Consistency ................................................................. 94
   Zhenzhen Zhang, Jianjun Hou, Zhaohong Li, and Dongdong Li

An Effective Detection Method Based on Physical Traits of Recaptured
Images on LCD Screens .................................................. 107
   Ruihan Li, Rongrong Ni, and Yao Zhao
## Steganography and Steganalysis

- Video Steganalysis Based on Intra Prediction Mode Calibration
  - Yanbin Zhao, Hong Zhang, Yun Cao, Peipei Wang, and Xianfeng Zhao
  - Page 119

- Feature Selection for High Dimensional Steganalysis
  - Yanping Tan, Fangjun Huang, and Jiwu Huang
  - Page 134

- Synthetic Speech Detection and Audio Steganography in VoIP Scenarios
  - Daniele Capolupo and Fabrizio d’Amore
  - Page 145

## Digital Watermarking

- Fingerprinting for Broadcast Content Distribution System
  - Minoru Kuribayashi
  - Page 163

- Image Watermarking Based on Reflectance Modification
  - Piyanart Chotikawanid and Thumrongrat Amornraksa
  - Page 176

- Digital Video Watermark Optimization for Detecting Replicated Two-Dimensional Barcodes
  - Takeru Maehara, Ryo Ikeda, and Satoshi Ono
  - Page 191

- An Authentication and Recovery Scheme for Digital Speech Signal Based on DWT
  - Jing Wang, Zhenghui Liu, Junjie He, and Chuanda Qi
  - Page 206

- Enrichment of Visual Appearance of Aesthetic QR Code
  - Minoru Kuribayashi and Masakatu Morii
  - Page 220

- Nondestructive Readout of Copyright Information Embedded in Objects Fabricated with 3-D Printers
  - Piyarat Silapasuphakornwong, Masahiro Suzuki, Hiroshi Unno, Hideyuki Torii, Kazutake Uehira, and Youichi Takashima
  - Page 232

- Blind Watermarking Based on Adaptive Lattice Quantization Index Modulation
  - Bingwen Feng, Wei Lu, Wei Sun, Zhuoqian Liang, and Juan Liu
  - Page 239

- Self-Embedding Watermarking Scheme Based on MDS Codes
  - Dongmei Niu, Hongxia Wang, Minquan Cheng, and Linna Zhou
  - Page 250

- Watermarking Method Using Concatenated Code for Scaling and Rotation Attacks
  - Nobuhiro Hirata and Masaki Kawamura
  - Page 259
Contents

DCT-OFDM Based Watermarking Scheme Robust Against Clipping, Rotation, and Scaling Attacks ........................................ 271
Hiroaki Ogawa, Minoru Kuribayashi, Motoi Iwata, and Koichi Kise

Robust Imperceptible Video Watermarking for MPEG Compression and DA-AD Conversion Using Visual Masking .............. 285
Sang-Keun Ji, Wook-Hyung Kim, Han-Ul Jang, Seung-Min Mun, and Heung-Kyu Lee

Detection of Frequency-Scale Modification Using Robust Audio Watermarking Based on Amplitude Modulation .................. 299
Akira Nishimura

Audio Watermarking Using Different Wavelet Filters ...................... 312
Toshiki Ito, Hyunho Kang, Keiichi Iwamura, Kitahiro Kaneda, and Isao Echizen

Reversible Data Hiding

A Commutative Encryption and Reversible Watermarking for Fingerprint Image ......................................................... 323
Vaibhav B. Joshi, Dhruv Gupta, and Mehul S. Raval

Distortion-Free Robust Reversible Watermarking by Modifying and Recording IWT Means of Image Blocks ......................... 337
Shijun Xiang and Yi Wang

Reversible Data Hiding for Encrypted Audios by High Order Smoothness ........ 350
Jing-Yong Qiu, Yu-Hsun Lin, and Ja-Ling Wu

Completely Separable Reversible Data Hiding in Encrypted Images ........ 365
Dawen Xu, Kai Chen, Rangding Wang, and Shubing Su

Optimal Histogram-Pair and Prediction-Error Based Reversible Data Hiding for Medical Images ................................ 378
Xuefeng Tong, Xin Wang, Guorong Xuan, Shumeng Li, and Yun Q. Shi

Visual Cryptography

Authenticated Secret Sharing Scheme Based on GMEMD ............... 395
Wen-Chung Kuo, Shao-Hung Kuo, Hong-Yi Chang, and Lih-Chyau Wuu

Robust Content-Based Image Hash Functions Using Nested Lattice Codes .... 406
Thanh Xuan Nguyen, Ricardo A. Parrao Hernandez, and Brian M. Kurkoski
An Improved Aspect Ratio Invariant Visual Cryptography Scheme with Flexible Pixel Expansion

Wen Wang, Feng Liu, Weiqi Yan, Gang Shen, and Teng Guo

A New Construction of Tagged Visual Cryptography Scheme

Yawei Ren, Feng Liu, Dongdai Lin, Rongquan Feng, and Wen Wang

Author Index
Digital-Forensics and Watermarking
14th International Workshop, IWDW 2015, Tokyo, Japan,
October 7-10, 2015, Revised Selected Papers
Shi, Y.-Q.; Kim, H.J.; Pérez-González, F.; Echizen, I. (Eds.)
2016, XVI, 448 p. 224 illus., Softcover
ISBN: 978-3-319-31959-9